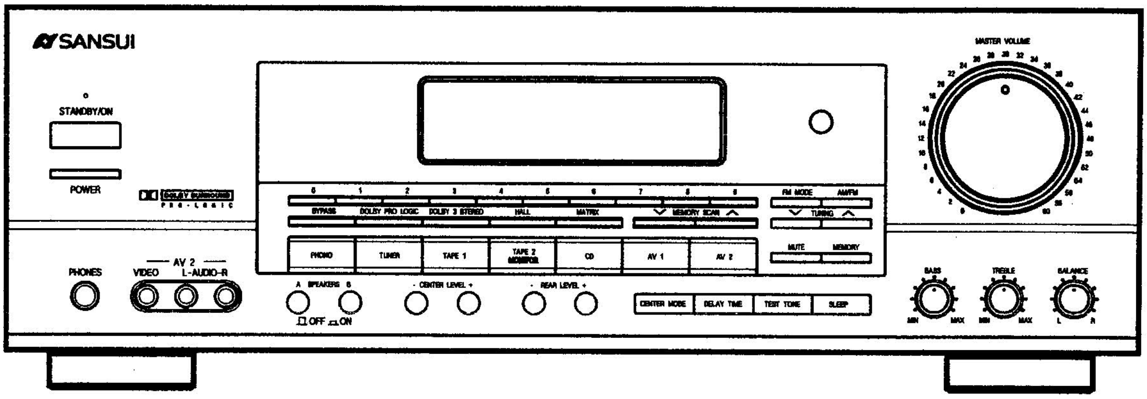
SANSUI


SANSUI
STANDBY/ON
POWER
PHONES
AV 2
VIDEO
L-AUDIO-R
SPEAKERS
OFF ON
CENTER LEVEL
REAR LEVEL
BYPASS
DOLBY PRO LOGIC
DOLBY 3 STEREO
HALL
MATRIX
MEMORY SCAN
FM MODE
AM/FM
TUNING
MUTE
MEMORY
PHONO
TUNER
TAPE 1
TAPE 2 MONITOR
CD
AV 1
AV 2
CENTER MODE
DELAY TIME
TEST TONE
SLEEP
MASTER VOLUME
BASS
TREBLE
BALANCE
MIN
MAX
L
R

SERVICE MANUAL

SPECIFICATION

MODEL:RZ-5100/5110/5200AV

AMPLIFIER

1. When SURROUND is "OFF"

Sensitivity and Impedance
PHONO:2.5mV/47kΩ
CD,TAPE,AV:180mV/47kΩ

Frequency Response
PHONO(RIAA STANDARD CURVE)
:50Hz ~ 15KHz(±1dB)
CD,TAPE,AV:30Hz ~ 75KHz

Signal to Noise Ratio
PHONO (IHF-A) :65dB
CD,TAPE,AV (IHF-A) :85dB

RZ-5100AV(ASIA)/RZ-5200AV(FTC POWER):
70W,30Hz ~ 20KHz,8ohm,0.5% THD

RZ-5110AV/RZ-5100AV(Europe)(DIN POWER):
80W,1KHz,8ohm,0.5% THD

2. When SURROUND is "ON"
(4 Ch surround mode)

Power Output

RZ-5100AV(ASIA)/RZ-5200AV
Front : 50 + 50W (1KHz,0.1% THD,8ohm)
Rear : 15 + 15W (1KHz,0.5% THD,8ohm)

RZ-5110AV/RZ-5100AV(Europe)(DIN POWER):
Front : 50 + 50W (1KHz,0.1% THD,8ohm)
Rear : 15 + 15W (1KHz,0.5% THD,8ohm)

3. When Dolby Pro Logic is "ON"

Power output

RZ-5100AV(ASIA)/RZ-5200AV
Front : 50 + 50W (1KHz,0.1% THD,8ohm)
Center : 50W (1KHz,0.1% THD,8ohm)
Rear : 15 + 15W (1KHz,0.5% THD,8ohm)

RZ-5110AV,RZ-5100AV(Europe)(DIN POWER):
Front : 50 + 50W (1KHz,0.1% THD,8ohm)
Center : 50W (1KHz,0.1% THD,8ohm)
Rear : 15 + 15W (1KHz,0.5% THD,8ohm)

TUNER

1. FM SECTION

Frequency Range : 87.50MHz to 108.00MHz
Europe:(50KHz step)
ASIA,America:(100KHz step)

Sensitivity(S/N 30dB) : 3.0μV

Total Harmonic Distortion
MONO:0.2%, STEREO:0.5%

Signal to Noise Ratio
MONO:65dB, STEREO:60dB

Frequency Response : 20Hz ~ 15KHz
Image Rejection : 60dB
Stereo Separation(1KHz) : 40dB

2. AM SECTION

Frequency Range :
Europe,ASIA : 522KHz to 1620KHz(9KHz step)
America : 530KHz to 1720KHz(10KHz step)

Sensitivity(S/N 30dB) : 60dB
Total Harmonic Distortion : 2%
Signal to Noise Ratio : 40dB
Image Rejection : 35dB

GENERAL

Power comsumption
RZ-5110AV/RZ-5100AV(Europe) : 170W
RZ-5100AV(ASIA)/RZ-5200AV(STD) : 160W
RZ-5200AV(UL) : 180W

Power supply
RZ-5110AV/RZ-5100AV(Europe) : 230V,50Hz
RZ-5100AV(ASIA)/RZ-5200AV(STD):115V,230V/50Hz,60Hz
RZ-5200AV(UL) : 120V,60Hz

Dimension(W×H×D) : 430×147×398 mm
Weight : 9.35Kg

Standard accessories

Remote control unit..1
Operator's manual..1

※ **Because we continually strive to improve our products, we reserve the right to alter specifications with notice.**

CONTENTS

SAFETY INSTRUCTIONS 3

MEASUREMENTS AND ADJUSTMENTS 4

ADJUSTMENT POINT 7

IC PIN FUNCTION 9

ACTIVE DEVICES VOLTAGE 16

WIRING DIAGRAM 19

BLOCK DIAGRAM 21

SCHEMATIC DIAGRAM 25

PRINTED CIRCUIT BOARDS 37

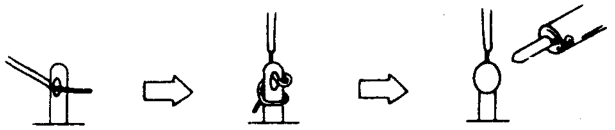
EXPLODED VIEW 45

PARTS LIST 51

SAFETY INSTRUCTIONS

PRECAUTIONS DURING SERVICING

1. Parts identifide by the △ (∗)symbol parts are critical for safety. Replace only with parts number specified.
2. In addition to safety, other parts and assemblies are specified for conformance with such regulations as those applying to spurious radiation.
   These must also be replaced only with specifide replacements.
   Examples :RF converters, tuner units, antenna selectswitches, RF cables, noise blocking capacitors, noise blocking filters, etc.
3. Use specified internal wiring. Note especially :
   1) Wires covered with PVC tubing
   2) Double insulated wires
   3) High voltage leads
4. Use specified insulating materials for hazardous live parts. Note especially:
   1) Insulation Tape
   2) PVC tubing
   3) Spacers(insulating barriers)
   4) Insulation sheets for transistors
   5) Plastic screws for fixing micro switches
5. When replacing AC primary side components (transformers, power cords, noise blocking capacitors, etc.), wrap ends of wires securely about the terminals before soldering.



6. Make sure that wires to do not contact heat producing parts (heat sinks, oxide metal film resistors, fusible resistors, etc.).
7. Check that replaced wires do not contact sharp edged or pointed parts.
8. Also check areas surrounding repaired locations.
9. Make sure that foreign objects (screws, solder droplets, etc.) do not remain inside the set.

MAKE YOUR CONTRIBUTION TO PROTECT THE ENVIRONMENT

Used batteries with the ISO symbol for recycling as well as small accumulators (rechargeable batteries), mini-batteries (cells) and starter batteries should not be thrown into the garbage can.

Please leave them at an appropriate depot. All other household batteries can be thrown out with the household waste.

SAFETY CHECK AFTER SERVICING

After servicing, make measurements of leakage-current or resistance in order to determine that exposed parts are acceptably insulated from the supply circuit.

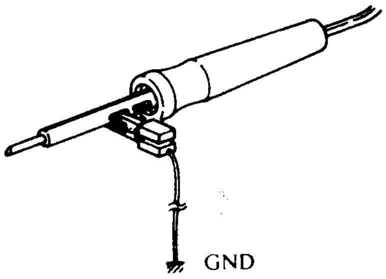
The leakage-current measurement should be done between accessible metal parts (such as chassis, ground terminal, microphone jacks, signal input/output connectors, etc.) and the earth ground through a resister of 1500 ohms paralleled with a 0.15 µF capacitor, under the unit's normal working conditions. The leakage-current should be less than 0.5mA rms AC.

The resistance measurement should be done between accessible exposed metal parts and power cord plug prongs with the power switch (if included) "ON". The resistance should be more than 2.2M Ohms.

PRECAUTIONS IN REPAIRING

When repairing or adjusting the unit, please note the following points.

1. Do not put excessive pressure on the mechanical part (operation part), including the pick-up block, as extremely high mechanical precision is required in these parts.
2. When the base is removed for repair adjustment, make sure that there are no metal obiects in the narrow gap between the P. C. board or the mecha parts and the base
3. The Micro-Computer and the CD signal processing ICs can be damaged by static electricity or leakage from a soldering iron during repairing. While soldering, please take the precautions against leakage as in the illustration.



4. Do not loosen any screws in the pick-up block.
   When handing the pick-up block, please refer to the points to NOTE when replacing the pick-up block.
5. Keep safety for hazardous invisible Laser Radiation, DO NOT watch the Laser Beam (Objective lens) directly.
6. Models for some countries, laser warning labels are affixed on the unit and inside of the unit, as shown below. Read it carefully for your safety, when repairing or adjusting the unit.

MEASUREMENTS AND ADJUSTMENTS

■ ALIGNMENT INSTRUTIONS

EQUIPMENT NEEDED:

AM Signal Generator
FM Signal Generator
Oscilloscope
VTVM (AC,DC)
Test loop antenna (AM Adjustment)
Dummy antenna (FM Adjustment)
Stereo signal modulator (RDS IN:EUROPE Only)

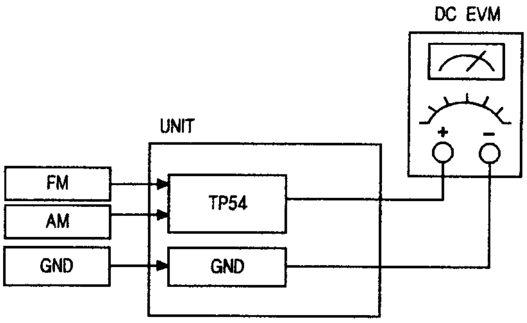
IMPORTANT

1. Check power-source voltagd.
2. Set the function switch to band aligned.
3. Keep the signal input as low as possible to adjust accurately.
4. Modulation and modulation frequency.

Item / Band	Modulation	Modulation frequency
AM	30%	400Hz
FM	100% (75KHz Dec.)	400Hz

1. TUNING FREQUENCY RANGE ADJUSTMENTS

(FM,AM) DC VOLTMETER .... CONNECT TO TEST POINT TP54 AND GND



(EUROPE/ASIA)

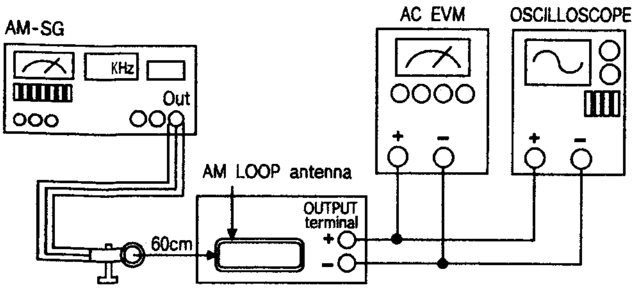
NO	Band	Frequency	Adjust for	Adjustment
1	FM	87.50MHz	1.5V	L7
2	AM	522KHz	1V	L502

(AMERICA)

NO	Band	Frequency	Adjust for	Adjustment
1	FM	87.50MHz	1.5V	L7
2	AM	530KHz	1V	L502

2. AM TRACKING ADJUSTMENT

Signal Generator .... Connects to the AM ANT. Coil through the loop antenna.
Adjust for the indication of VTVM of the wave form scope to be maximum.



(EUROPE/ASIA)

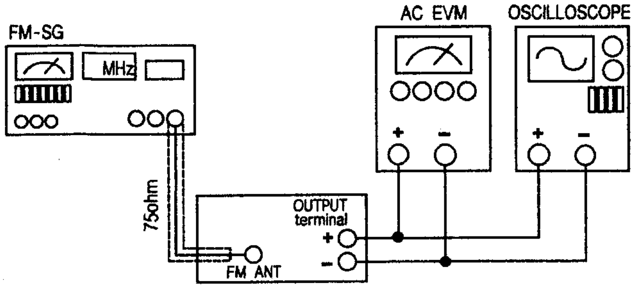
Band	Step	Frequency	Adjust for	Adjustment
AM	1	612KHz	Maximum sensitivity	L501,L502
	2	1503KHz	Maximum sensitivity	CT51
	3	Repeat steps 1 and 2 several times		

(AMERICA)

Band	Step	Frequency	Adjust for	Adjustment
AM	1	610KHz	Maximum sensitivity	L501,L502
	2	1500KHz	Maximum sensitivity	CT51
	3	Repeat steps 1 and 2 several times		

3. FM RF ADJUSTMENT

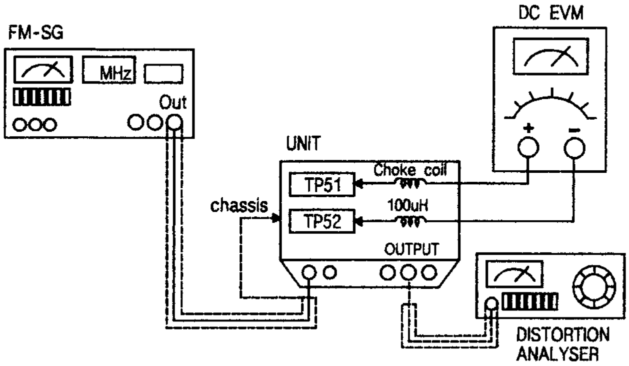
Signal Generator .... Connects to the FM ANT JACK(FM IN) through the dummy.


FM-SG
MHz
AC EVM
OSCILLOSCOPE
75ohm
OUTPUT terminal
FM ANT
+
-

No.	Frequency	Adjust for	Adjustment
1	87.50MHz	Maximum sensitivity	L2,L5,L6
2	Repeat steps 1 and 2 several times		

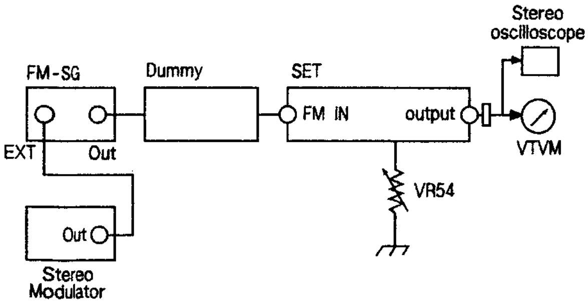
4. FM MONO DISTORTION ADJUSTMENT

DC VOLTMETER .... CONNECT TO TP51(-),TP52(+) Through the choke coil(100uH)
Signal Generator .... Connects to the FM ANT JACK(FM IN) through the dummy.
Distortion Meter........ Connect to the output.


FM-SG
MHz
Out
DC EVM
UNIT
Choke coil
TP51
chassis
100uH
TP52
OUTPUT
DISTORTION ANALYSER

No.	Frequency	Adjust for	Adjustment
1	100.10MHz	DC Voltmeter 0V	T501
2	100.10MHz	Minimum T.H.D.	T502
3	Repeat steps 1 and 2 several times		

5. FM STEREO SEPARATION


Stereo oscilloscope
FM-SG
Dummy
SET
FM IN
output
EXT
Out
VTVM
VR54
Out
Stereo Modulator

Pilot signal	Adjust for	Adjustment
ON	Different of R or L must be maximum	VR54

NOTE : In case of adjusting the stereo separation of input is L(or R) channel,R (or L) channel must be maximum.

6. FM/AM AUTO STOP LEVEL ADJUSTMENT

FM Signal Generator .... Connect to the FM ANT JACK(FM IN) through the dummy.
Signal Generator .... Connect to the AM ANT. Coil through the loop antenna.

(EUROPE/ASIA)

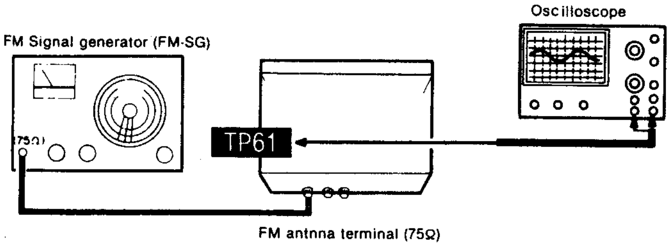
Band	Step	Frequency	Adjust for		Adjustment
FM	1	100.1MHz, 35dB	TUNED	Display OFF	VR52
	2	100.1MHz, 35dB	TUNED	Display ON	VR52
AM	1	999KHz, 80dB	TUNED	Display OFF	VR51
	2	999KHz, 80dB	TUNED	Display ON	VR51

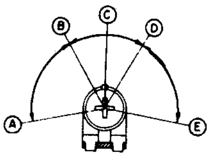
(AMERICA)

AM	1	990KHz, 80dB	TUNED	Display OFF	VR51
	2	990KHz, 80dB	TUNED	Display ON	VR51

7. FM RDS ADJUSTMENT (EUROPE Only)

FM Signal Generator(RDS IN) .... Connect to the FM ANT JACK(FM IN) through the dummy.
Oscilloscope......................... Connect to TP53(+) GND(-)

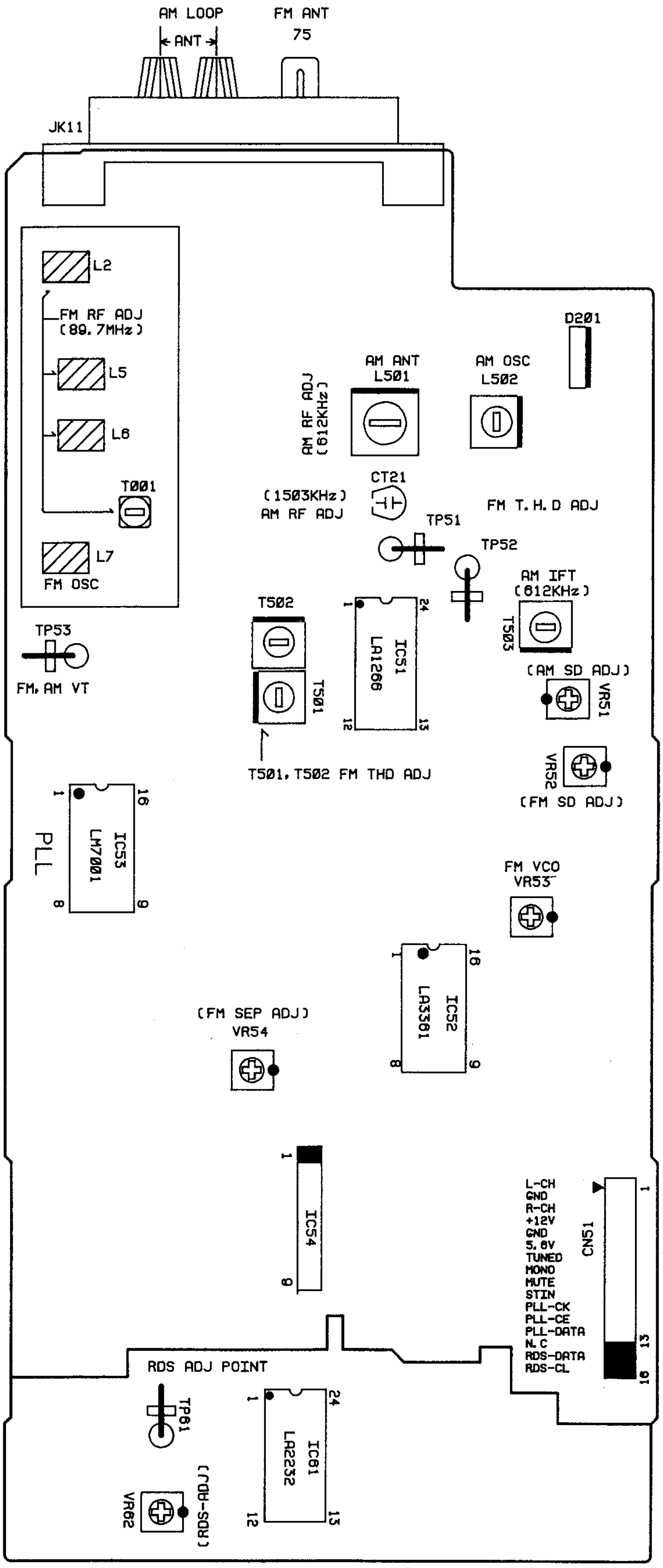

Oscilloscope
FM Signal generator (FM-SG)
(75Ω)
TP61
FM antnna terminal (75Ω)



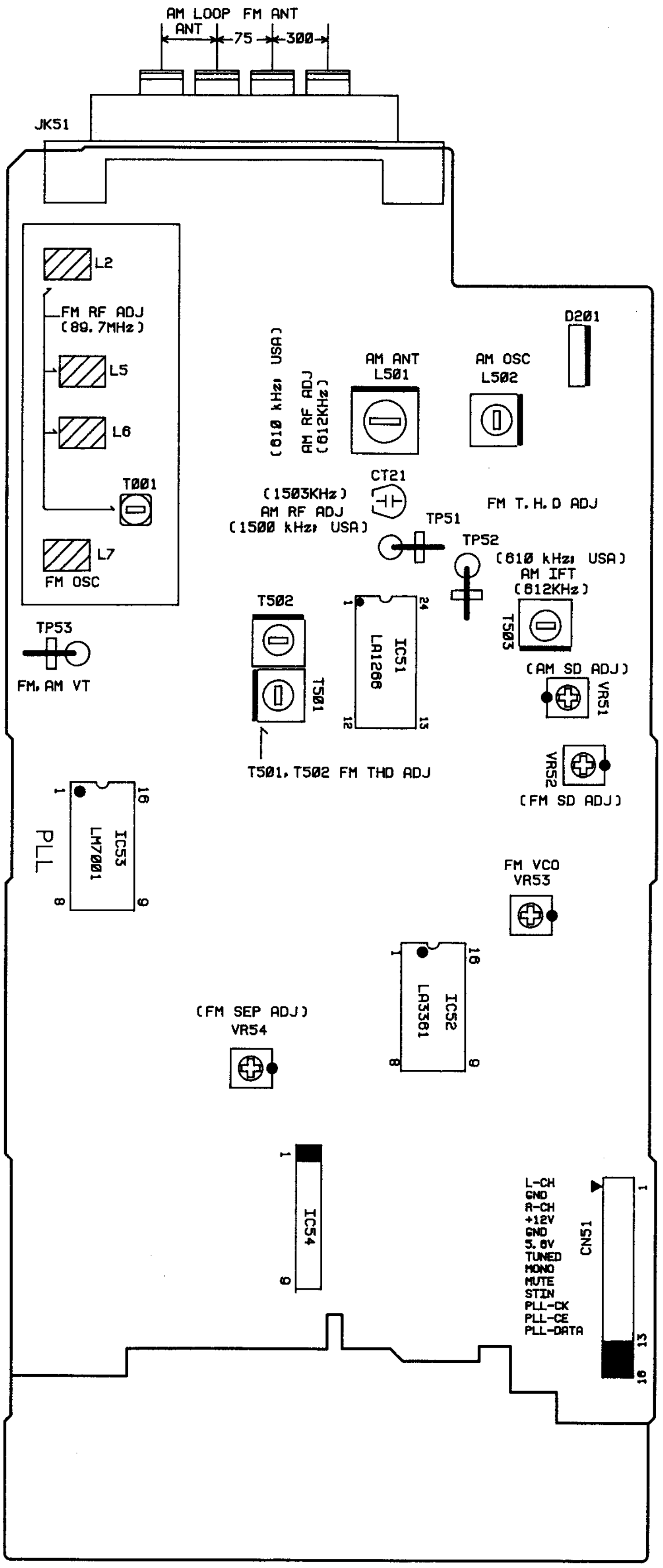
VR62

A-B,D-E : RDS OFF position.
B-D : RDS ON position.(indicator lighting)
C : Adjust point of RDS circuit.
(TP53:1.0 ~ 1.2V)

ADJUSTMENT POINT


AM LOOP
ANT
FM ANT
75
JK11
L2
FM RF ADJ
(89.7MHz)
L5
L6
T001
L7
FM OSC
TP53
FM, AM VT
AM RF ADJ
(612KHz)
AM ANT
L501
AM OSC
L502
D201
CT21
(1503KHz)
AM RF ADJ
TP51
FM T.H.D ADJ
TP52
AM IFT
(612KHz)
T503
T502
T501
IC51
LA1266
1
24
12
13
(AM SD ADJ)
VR51
VR52
(FM SD ADJ)
T501, T502 FM THD ADJ
IC53
LM7001
PLL
1
16
8
9
FM VCO
VR53
IC52
LA3361
1
16
8
9
(FM SEP ADJ)
VR54
IC54
1
9
L-CH
GND
R-CH
+12V
GND
5.6V
TUNED
MONO
MUTE
STIN
PLL-CK
PLL-CE
PLL-DATA
N.C
RDS-DATA
RDS-CL
CN51
1
13
16
RDS ADJ POINT
TP61
IC61
LA2232
1
24
12
13
VR62
(RDS-ADJ)

(EUROPE ONLY)


AM LOOP ANT
FM ANT
75
300
JK51
L2
FM RF ADJ (89.7MHz)
L5
L6
T001
L7
FM OSC
(610 kHz, USA)
AM RF ADJ (612KHz)
AM ANT
L501
AM OSC
L502
D201
CT21
(1503KHz)
AM RF ADJ
(1500 kHz, USA)
FM T.H.D ADJ
TP51
TP52
(610 kHz, USA)
AM IFT
(612KHz)
T503
T502
T501
IC51
LA1266
1
24
12
13
TP53
FM, AM VT
(AM SD ADJ)
VR51
VR52
(FM SD ADJ)
T501, T502 FM THD ADJ
PLL
IC53
LM7001
1
16
8
9
FM VCO
VR53
IC52
LA3361
1
16
8
9
(FM SEP ADJ)
VR54
IC54
1
9
L-CH
GND
R-CH
+12V
GND
5.6V
TUNED
MONO
MUTE
STIN
PLL-CK
PLL-CE
PLL-DATA
CN51
1
13
16

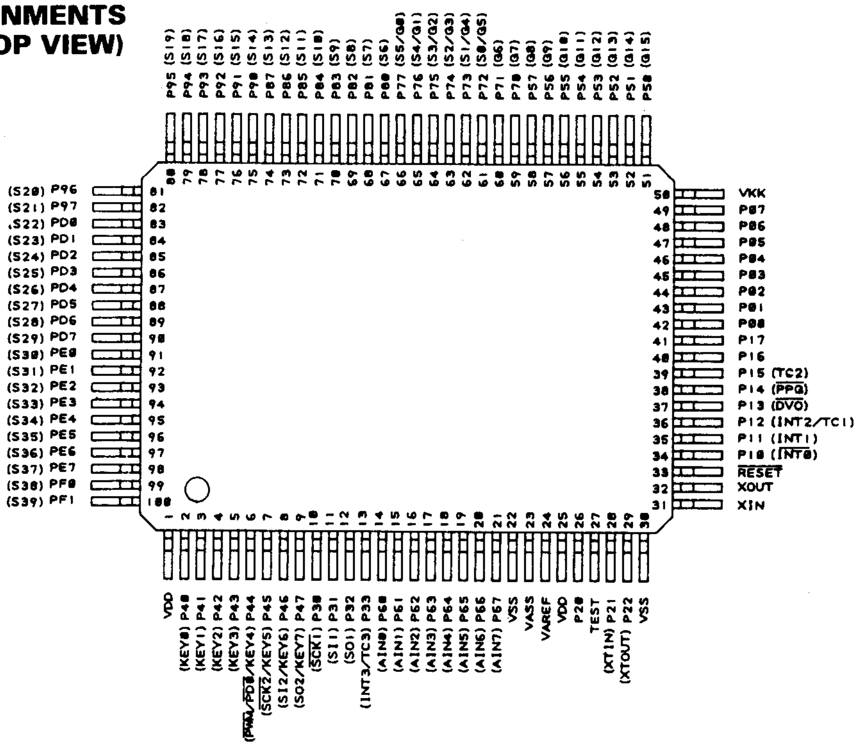
(ASIA, USA, ETC)

IC PIN FUNCTION (IC : ANAM1174M)

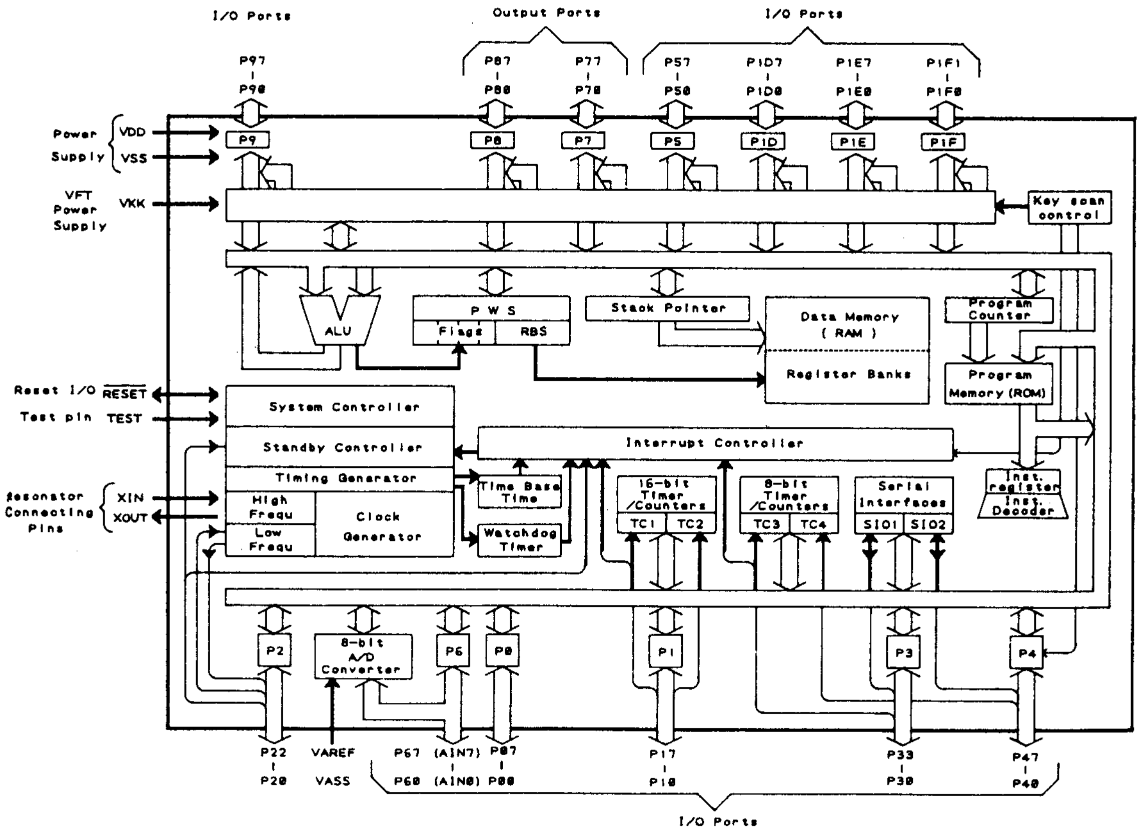
PIN No.	PIN NAME	I/O	DESCRIPTION
1	VDD	-	Power supply (+5V)
2 ~5	OPTION	I	Devices option port
6	TUNER MUTE	O	Tuner mute on/off control output
7	MONO	I	MONO control input
8	RDS MUTE	O	RDS mute on/off control output
9	FUNCTION MUTE	O	Function mute on/off control output
10	N.C	-	Non connection
11	RDS DATA	O	RDS data output
12	N.C	-	Non connection
13	RDS CLOCK	O	RDS clock output
14	STEREO IN	I	Stereo in control input
15	TUNED	I	Tuned control input
16	PROTECT IN	I	Input form protection circuit
17~21	KEY MATRIX	I	Key MATRIX ports
22	VSS	-	GND
23	AVSS	-	GND
24	VAREF	-	A/D convertor reference voltage
25	VDD	-	Power supply (+5V)
26	BACK UP	I	Back-up mode control input
27	TEST	-	GND
28,29	N.C	-	Non connection
30	VSS	-	GND
31	XIN	I	8MHz Crystal connecting terminal
32	XOUT	O	8MHz Crystal connecting terminal
33	RESET	I	System reset pulse input
34	REMOTE IN	I	Remote control signal input
35		-	
36		-	
37	POWER ON/OFF	O	Power on/off control output
38	SURROUND ON/OFF	O	Surround on/off control output
39	-20dB MUTE	O	-20dB mute on/off control output
40	REMOTE OUT	O	System remote control output
41	SURROUND CLOCK	O	Surround clock output
42	PLL CE	O	PLL CE output
43	STROBE	O	STROBE output
44	REQ	O	REQ output
45	CLOCK	O	CLOCK output
46	DATA	O	DATA output
47	AV2 CONTROL	O	AV2 Video function control output
48	AV1 CONTROL	O	AV1 Video function control output
49	CD CONTROL	O	CD Video function control output
50	VFLP	-	(-33V) Negative power supply for FIP blinking
51~74	SEGMENT	O	FIP SEGMENT control outputs
75~89	GRID	O	FIP grid control outputs
90	N.C	-	Non connection
91	VR UP	O	Volume UP control outputs
92	VR DOWN	O	Volume DOWN control outputs
93	VR LED	O	Volume LED ON/OFF control outputs
94	POWER LED	O	Power LED ON/OFF control outputs
95~98	N.C	-	Non connection
99,100	SEGMENT	O	FIP SEGMENT control outputs

(U—COM FUNCTION : BVIANAM1174 T)

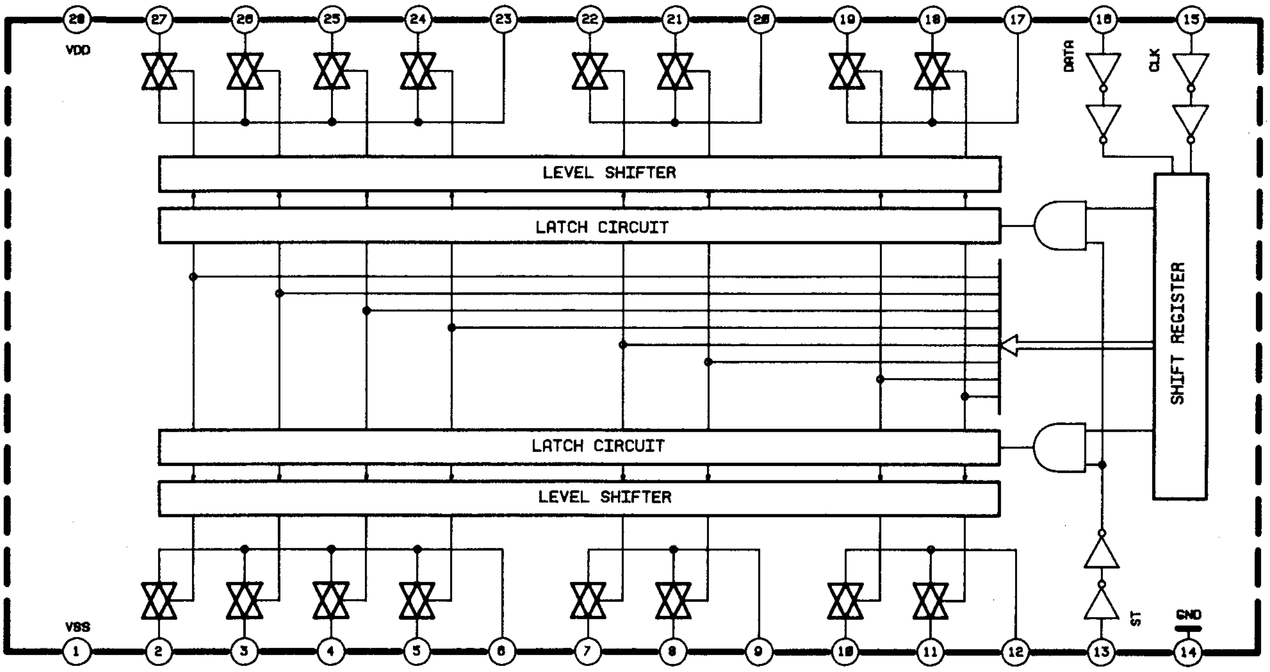
PIN ASSIGNMENTS (TOP VIEW)


P95 (S19)
P94 (S18)
P93 (S17)
P92 (S16)
P91 (S15)
P90 (S14)
P87 (S13)
P86 (S12)
P85 (S11)
P84 (S10)
P83 (S9)
P82 (S8)
P81 (S7)
P80 (S6)
P77 (S5/G0)
P76 (S4/G1)
P75 (S3/G2)
P74 (S2/G3)
P73 (S1/G4)
P72 (S0/G5)
P71 (G6)
P70 (G7)
P57 (G8)
P56 (G9)
P55 (G10)
P54 (G11)
P53 (G12)
P52 (G13)
P51 (G14)
P50 (G15)
(S20) P96
(S21) P97
(S22) PD0
(S23) PD1
(S24) PD2
(S25) PD3
(S26) PD4
(S27) PD5
(S28) PD6
(S29) PD7
(S30) PE0
(S31) PE1
(S32) PE2
(S33) PE3
(S34) PE4
(S35) PE5
(S36) PE6
(S37) PE7
(S38) PF0
(S39) PF1
VKK
P07
P06
P05
P04
P03
P02
P01
P00
P17
P16
P15 (TC2)
P14 (PPG)
P13 (DVO)
P12 (INT2/TC1)
P11 (INT1)
P10 (INT0)
RESET
XOUT
XIN
VDD
(KEY0) P40
(KEY1) P41
(KEY2) P42
(KEY3) P43
(PWM/PDO/KEY4) P44
(SCK2/KEY5) P45
(SI2/KEY6) P46
(SO2/KEY7) P47
(SCK1) P30
(SI1) P31
(SO1) P32
(INT3/TC3) P33
(AIN0) P60
(AIN1) P61
(AIN2) P62
(AIN3) P63
(AIN4) P64
(AIN5) P65
(AIN6) P66
(AIN7) P67
VSS
VASS
VAREF
VDD
P20
TEST
(XTIN) P21
(XTOUT) P22
VSS

BLOCK DIAGRAM

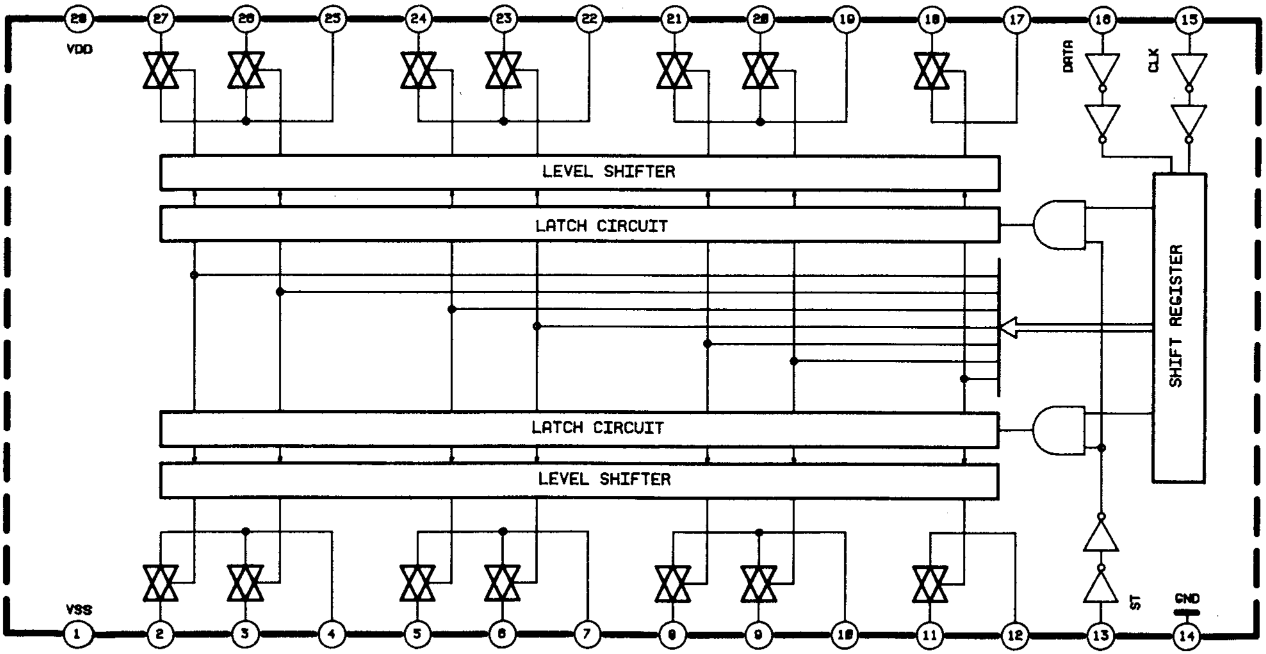

I/O Ports
Output Ports
I/O Ports
P97 ~ P90
P87 ~ P80
P77 ~ P70
P57 ~ P50
P1D7 ~ P1D0
P1E7 ~ P1E0
P1F1 ~ P1F0
P9
P8
P7
P5
P1D
P1E
P1F
Power Supply
VDD
VSS
VFT Power Supply
VKK
Key scan control
ALU
P W S
Flags
RBS
Stack Pointer
Data Memory (RAM)
Register Banks
Program Counter
Program Memory (ROM)
Reset I/O
RESET
Test pin
TEST
System Controller
Standby Controller
Timing Generator
Resonator Connecting Pins
XIN
XOUT
High Frequ
Low Frequ
Clock Generator
Interrupt Controller
Time Base Timer
Watchdog Timer
16-bit Timer /Counters
TC1
TC2
8-bit Timer /Counters
TC3
TC4
Serial Interfaces
SIO1
SIO2
Inst. register
Inst. Decoder
P2
8-bit A/D Converter
P6
P0
P1
P3
P4
P22 ~ P20
VAREF
VASS
P67 ~ P60
(AIN7) ~ (AIN0)
P07 ~ P00
P17 ~ P10
P33 ~ P30
P47 ~ P40
I/O Ports

NJN7311AL



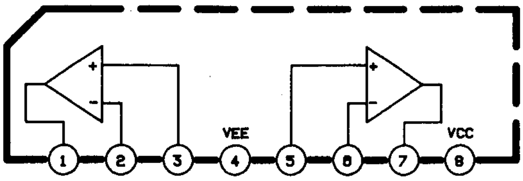
28
27
26
25
24
23
22
21
20
19
18
17
16
15
VDD
DATA
CLK
LEVEL SHIFTER
LATCH CIRCUIT
SHIFT REGISTER
LATCH CIRCUIT
LEVEL SHIFTER
ST
GND
VSS
1
2
3
4
5
6
7
8
9
10
11
12
13
14

NJN7313AL

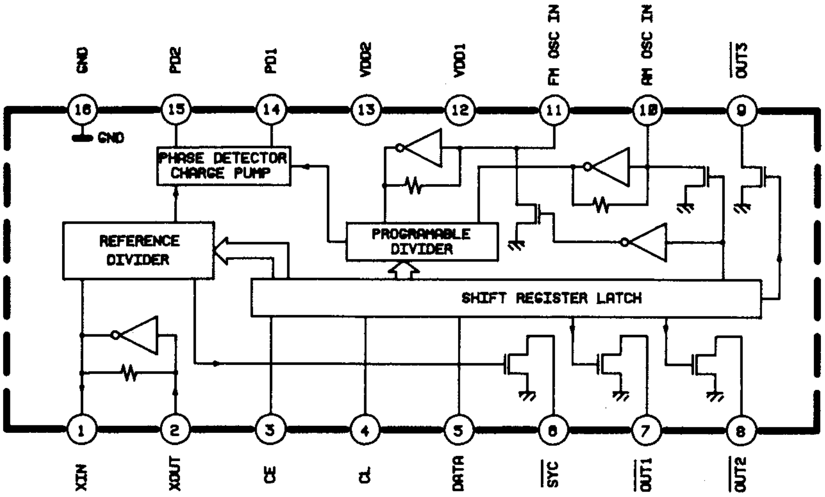


28
27
26
25
24
23
22
21
20
19
18
17
16
15
VDD
DATA
CLK
LEVEL SHIFTER
LATCH CIRCUIT
SHIFT REGISTER
LATCH CIRCUIT
LEVEL SHIFTER
ST
GND
VSS
1
2
3
4
5
6
7
8
9
10
11
12
13
14

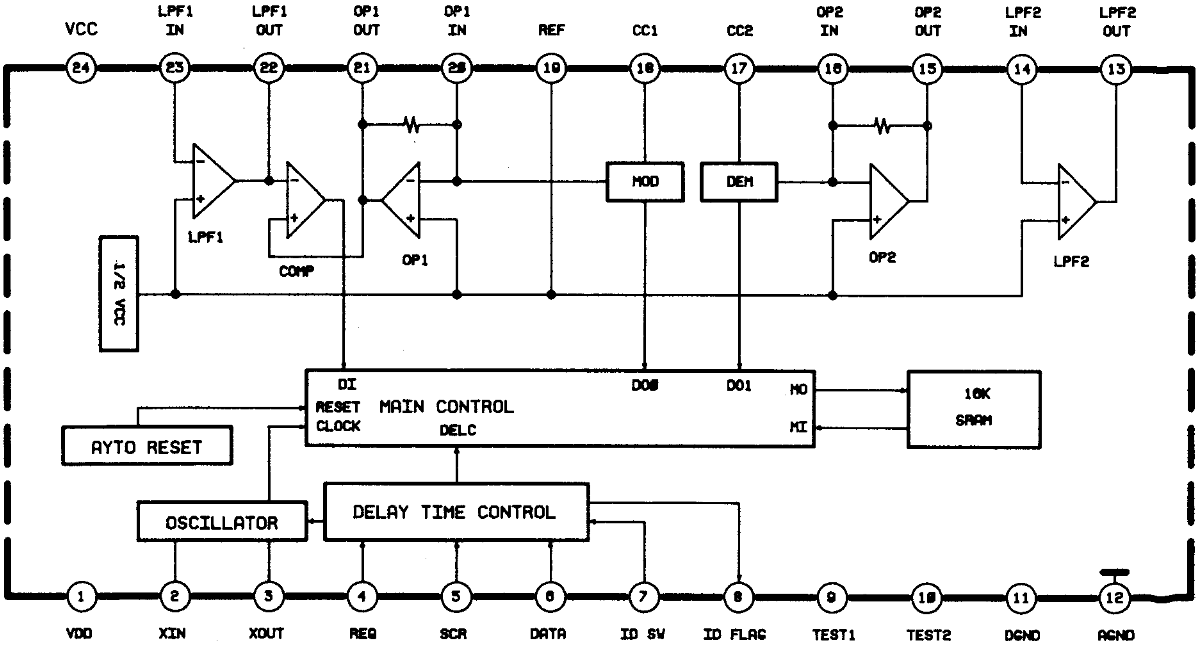
NJN4558S, KIA6259S


VEE
VCC
1
2
3
4
5
6
7
8

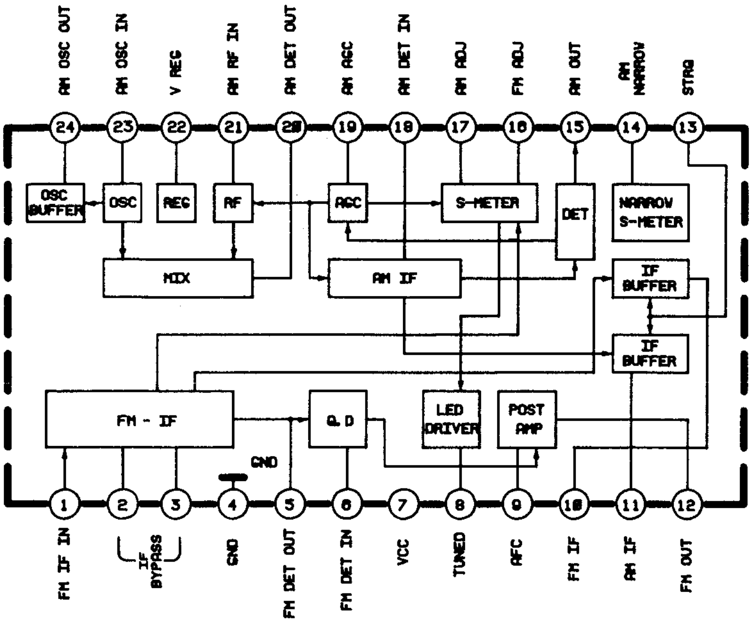
LM7001 PLL


GND
PD2
PD1
VDD2
VDD1
FM OSC IN
AM OSC IN
OUT3
16
15
14
13
12
11
10
9
GND
PHASE DETECTOR
CHARGE PUMP
REFERENCE DIVIDER
PROGRAMABLE DIVIDER
SHIFT REGISTER LATCH
1
2
3
4
5
6
7
8
XIN
XOUT
CE
CL
DATA
SYC
OUT1
OUT2

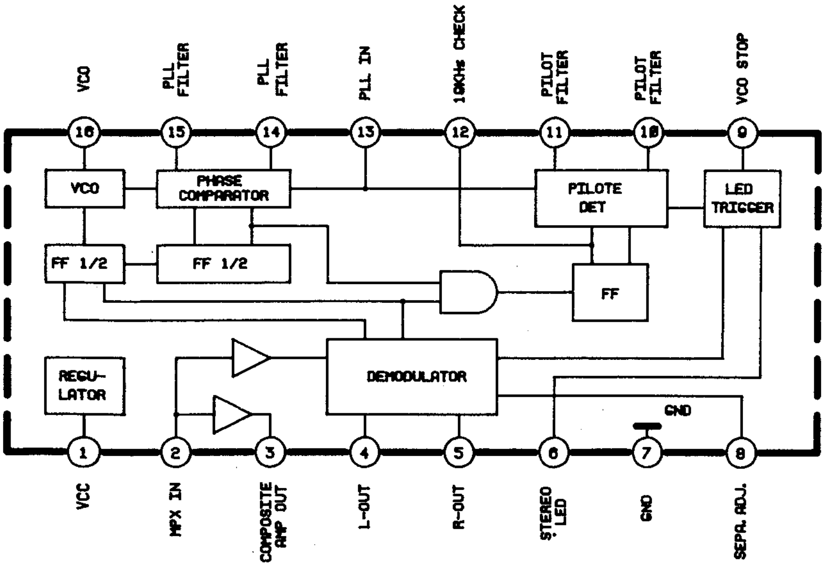
MJU9702D


VCC
LPF1 IN
LPF1 OUT
OP1 OUT
OP1 IN
REF
CC1
CC2
OP2 IN
OP2 OUT
LPF2 IN
LPF2 OUT
24
23
22
21
20
19
18
17
16
15
14
13
LPF1
COMP
OP1
MOD
DEM
OP2
LPF2
1/2 VCC
DI
RESET
CLOCK
MAIN CONTROL
DELC
DO0
DO1
MO
MI
16K SRAM
AYTO RESET
OSCILLATOR
DELAY TIME CONTROL
1
2
3
4
5
6
7
8
9
10
11
12
VDD
XIN
XOUT
REQ
SCR
DATA
ID SW
ID FLAG
TEST1
TEST2
DGND
AGND

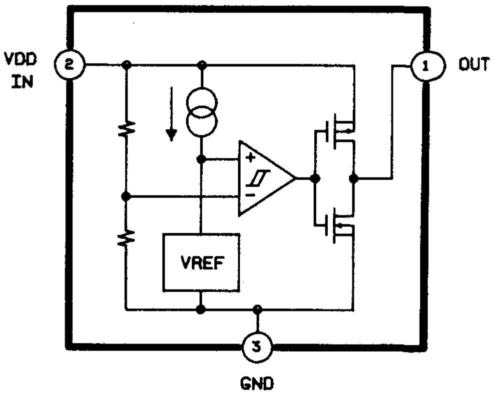
LA1266 FM IF & AM RF/IF


AM OSC OUT
AM OSC IN
V REG
AM RF IN
AM DET OUT
AM AGC
AM DET IN
AM ADJ
FM ADJ
AM OUT
AM NARROW
STRG
24
23
22
21
20
19
18
17
16
15
14
13
OSC BUFFER
OSC
REG
RF
AGC
S-METER
DET
NARROW S-METER
MIX
AM IF
IF BUFFER
IF BUFFER
FM - IF
Q. D
LED DRIVER
POST AMP
GND
1
2
3
4
5
6
7
8
9
10
11
12
FM IF IN
IF BYPASS
GND
FM DET OUT
FM DET IN
VCC
TUNED
AFC
FM IF
AM IF
FM OUT

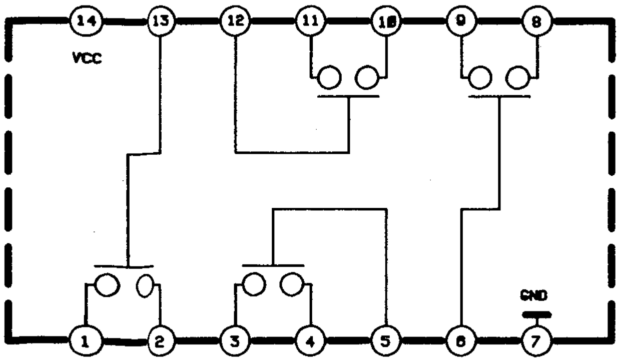
LA3361 MPX


VCO
PLL FILTER
PLL FILTER
PLL IN
19KHz CHECK
PILOT FILTER
PILOT FILTER
VCO STOP
16
15
14
13
12
11
10
9
VCO
PHASE COMPARATOR
PILOTE DET
LED TRIGGER
FF 1/2
FF 1/2
FF
REGU-LATOR
DEMODULATOR
GND
1
2
3
4
5
6
7
8
VCC
MPX IN
COMPOSITE AMP OUT
L-OUT
R-OUT
STEREO LED
GND
SEPA. ADJ.

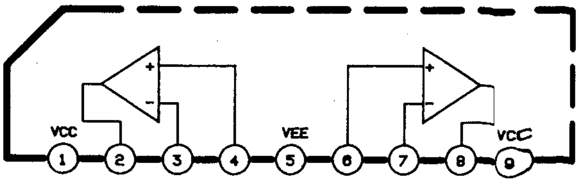
RE5VA30CC
RE5VL30CC


VDD IN
2
1
OUT
VREF
3
GND

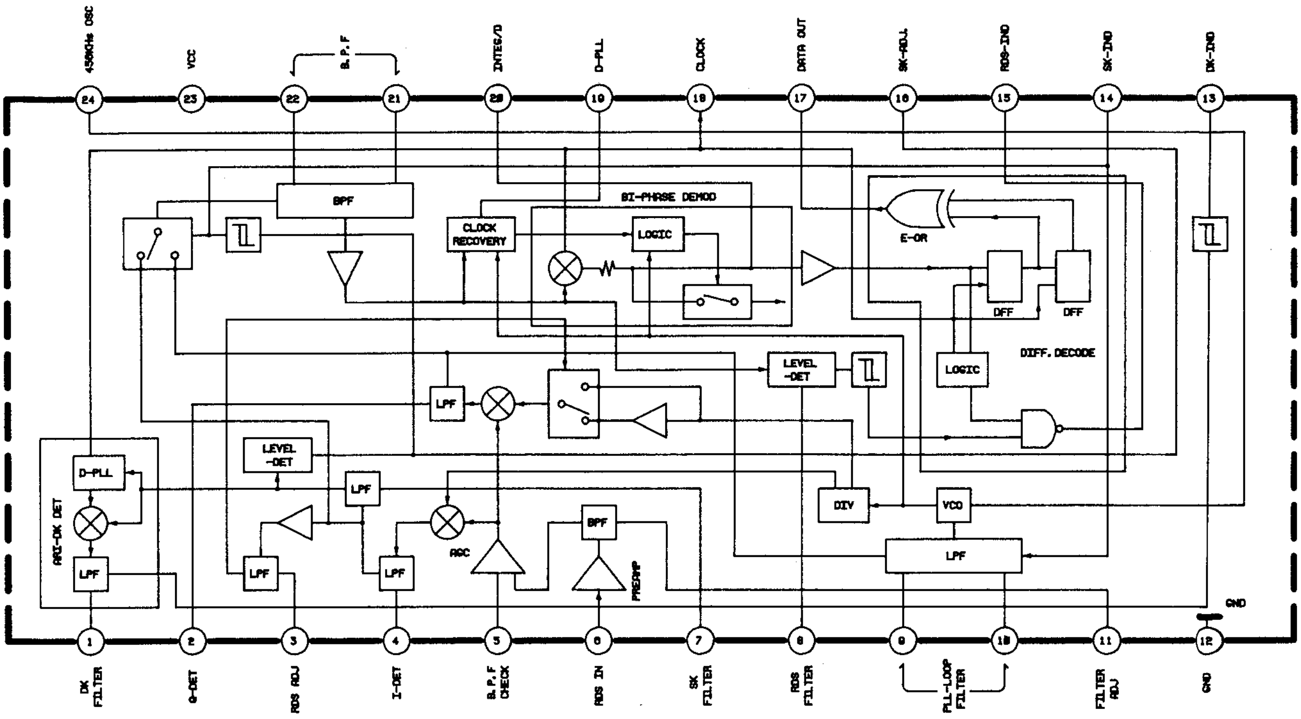
GD 4066B


14
13
12
11
10
9
8
VCC
GND
1
2
3
4
5
6
7

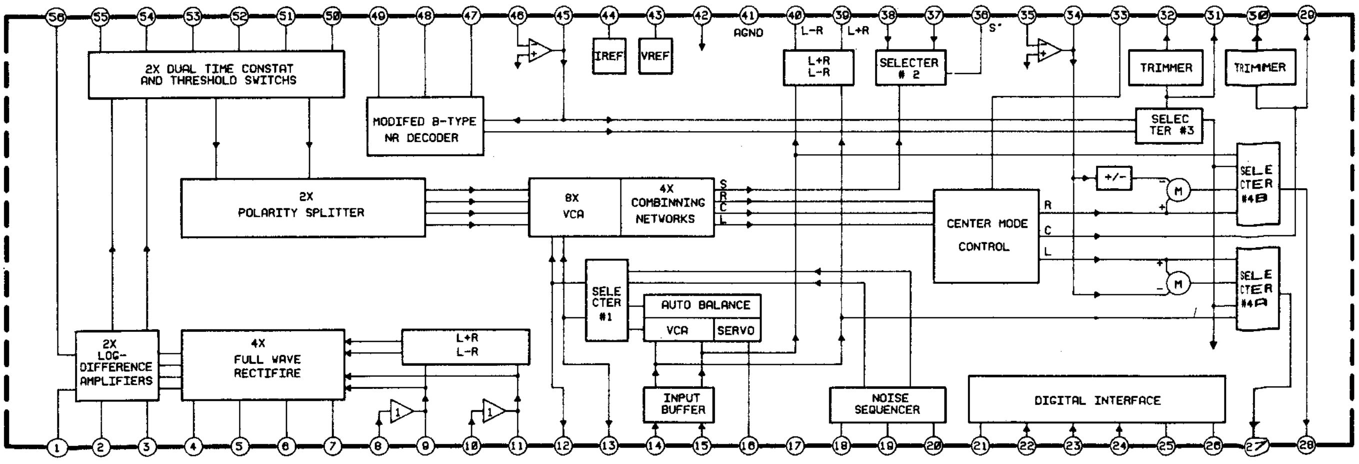
MC4558S

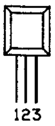
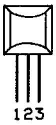
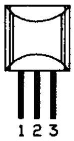
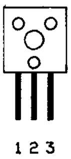
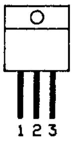
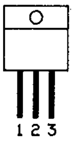
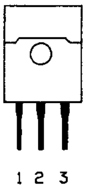
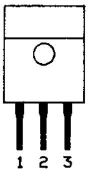
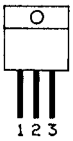

VCC
VEE
VCC
1
2
3
4
5
6
7
8
9

LA2232 RDS ENCODER


450KHz OSC
VCC
B.P.F
INTEG/D
D-PLL
CLOCK
DATA OUT
SK-ADJ
RDS-IND
SK-IND
DK-IND
24
23
22
21
20
19
18
17
16
15
14
13
BPF
CLOCK RECOVERY
BI-PHASE DEMOD
LOGIC
E-OR
DFF
DFF
DIFF. DECODE
LEVEL -DET
LOGIC
LPF
D-PLL
ARI-DK DET
LPF
LEVEL -DET
LPF
LPF
LPF
AGC
BPF
PREAMP
DIV
VCO
LPF
GND
1
2
3
4
5
6
7
8
9
10
11
12
DK FILTER
Q-DET
RDS ADJ
I-DET
B.P.F CHECK
RDS IN
SK FILTER
RDS FILTER
PLL-LOOP FILTER
FILTER ADJ
GND

NJW1102L


56
55
54
53
52
51
50
49
48
47
46
45
44
43
42
41
40
39
38
37
36
35
34
33
32
31
30
29
AGND
L-R
L+R
S'
2X DUAL TIME CONSTAT AND THRESHOLD SWITCHS
MODIFED B-TYPE NR DECODER
IREF
VREF
L+R L-R
SELECTER # 2
TRIMMER
TRIMMER
SELEC TER #3
2X POLARITY SPLITTER
8X VCA
4X COMBINNING NETWORKS
S
R
C
L
CENTER MODE CONTROL
R
C
L
+/-
M
M
SELE CTER #4B
SELE CTER #4A
SELE CTER #1
AUTO BALANCE
VCA
SERVO
2X LOG-DIFFERENCE AMPLIFIERS
4X FULL WAVE RECTIFIRE
L+R L-R
1
1
INPUT BUFFER
NOISE SEQUENCER
DIGITAL INTERFACE
1
2
3
4
5
6
7
8
9
10
11
12
13
14
15
16
17
18
19
20
21
22
23
24
25
26
27
28

TO-92S  1. EMITTER 2. COLLECTOR 3. BASE DTA114YS DTC114YS 2SC1740SR KSC2785Y DTC114TS KSR2206 KSA1175Y KSD1021Y KSA811Y	TO-92  1. EMITTER 2. COLLECTOR 3. BASE KTC2878B KSA992F KSA733CY KSC945CY KTA1271Y KTC3203Y KTC3192O	TO-92L  1. EMITTER 2. COLLECTOR 3. BASE KSA916Y KSC2316Y
TO-126  1. EMITTER 2. COLLECTOR 3. BASE KSA1220A KSC2690A	TO-220  1. BASE 2. COLLECTOR 3. EMITTER KSD288Y KSA614Y	TO-220F  1. BASE 2. COLLECTOR 3. EMITTER 2SD1585L
TO-3P  1. BASE 2. COLLECTOR 3. EMITTER 2SA1694 2SC4467	TO-3PF  1. BASE 2. COLLECTOR 3. EMITTER KTD998O KTB778O	TO-220  1. INPUT 2. GND 3. OUTPUT MC7805C MC7812C MC7912C

ACTIVE DEVICES VOLTAGE

TEST CONDITION

- Function : CD (No signal)
- Surround mode : OFF (BYPASS)
- Unit : V

Ref. No.	E	C	B	Ref. No.	E	C	B
Q1,Q2	0	0	-11.7	Q713,Q714	-0.6	-54.4	-1.1
Q101,Q103	0	0	-11.7	Q715,Q716	0	57.3	0.6
Q102,Q104	0	0	-11.9	Q717,Q718	0	-57.3	-0.6
Q105,Q106	0.6	-52.6	0	Q719,Q720	0	0	-11.7
Q107,Q108	0.6	-52.6	0	Q721,Q722	0	0	-11.9
Q109,Q110	-1.1	1.2	-0.5	Q723,Q724	0	11.7	0
Q111,Q112	-53.1	-0.6	-52.6	Q725	11.8	0	11.8
Q113,Q114	-53.1	-1.1	-52.6	Q726	0	11.5	0
Q115,Q116	0.6	54.4	1.2	Q727	0	11.7	0
Q117,Q118	-0.6	-54.4	-1.1	Q728	0	11.7	0
Q119,Q120	0	57.3	0.6	Q729	0	1.1	0
Q121,Q122	0	-57.3	-0.6	Q730	12	0	12
Q123,Q124	0	11.7	0	Q801	55	57	55.6
Q125	12	0	12	Q802	57	56	55
Q126	0	12	0	Q803	0	0	0.6
Q127	0	12	0	Q804	-55	-57	-55.6
Q128	12	0	12	Q805	-57	-56	-55.7
Q130	0	11.7	0	Q806	12	-53	0
Q131,Q132	0	0	2.1	Q807	0	12	11.4
Q261,Q262,Q263	3.2	0	2.6	Q808	0	0	0.6
Q264,Q265,Q266	3.7	2	3.1	Q901	5.6	5.6	5
Q701,Q702	0.6	-52.6	0	Q902	0	4.9	0
Q703,Q704	0.6	-52.6	0	Q904	4.5	0	4.5
Q705,Q706	-53.1	-0.6	-52.6	Q905	5	0	5
Q707,Q708	-53.1	-1.1	-52.6	Q908	5	5	0
Q709,Q710	-1.1	1.2	-0.5	Q909	0	0	5
Q711,Q712	0.6	54.4	1.2	Q910	0	5.6	0

IC27		
PIN No.	DESCRIPTION	VOLTAGE
1	IN/OUT 1	0
2	OUT/IN 1	2.6
3	OUT/IN 2	2.6
4	IN/OUT 2	0
5	CONT 2	0
6	CONT 3	0
7	VSS	0
8	IN/OUT 3	0
9	OUT/IN 3	2.6
10	OUT/IN 4	2.6
11	IN/OUT 4	0
12	CONT 4	0
13	CONT 1	0
14	VCC	6

IC1,IC4,IC31,IC32,IC35		
PIN No.	DESCRIPTION	VOLTAGE
1	A OUTPUT	0
2	A - INPUT	0
3	A + INPUT	0
4	VEE	-11.7
5	B + INPUT	0
6	B - INPUT	0
7	B OUTPUT	0
8	VCC	11.7

IC42

PIN No.	DESCRIPTION	VOLTAGE
1	RLC2	4
2	RLC1	4
3	RLC4	3.6
4	RLC7	3.6
5	RLC3	4
6	RLC8	4
7	RLC6	3.4
8	LLI	4
9	LBPF	4
10	RLI	4
11	RBPF	4
12	LT	4
13	RT	4
14	LIN	4
15	RIN	4
16	HOLDC	4
17	VCC	10
18	NGC3	4
19	NGC2	4
20	NGC1	2.5
21	VDD	4.8
22	DATA	DATA
23	SCK	SCK
24	REQ	REQ
25	IDS	0
26	VSS	0
27	LOUT	4
28	ROUT	4
29	CT	4
30	COUT	4
31	ST	4
32	SOUT	4
33	CMC	4
34	SMRO	4
35	SMRI	4
36	SD	4
37	SIMB	4
38	SIMA	4
39	L+R	4
40	L-R	4
41	GND	0
42	VREF	4
43	VREFG	4
44	IREF	1.4
45	DBIN	4
46	LPIN	4
47	DBC1	4
48	DBC2	4
49	DBC3	0
50	PSC3	4
51	PSC6	4
52	PSC2	4
53	PSC5	4
54	PSC1	4
55	PSC4	4
56	RLC5	3.4

IC2,IC3

PIN No.	DESCRIPTION	VOLTAGE
1	VEE	-12
2	L1/L1	0
3	L2/L2	0
4	L3/LCOM1	0
5	L4/L3	0
6	LCOM1/L4	0
7	LS/LCOM2	0
8	L6/L5	0
9	LCOM2/L6	0
10	L7/LCOM3	0
11	L8/L7	0
12	LCOM3/LCOM4	0
13	STROBE	STROBE
14	GND	0
15	CK	CK
16	DATA	DATA
17	RCOM3/RCOM4	0
18	R8/R7	0
19	R7/RCOM3	0
20	RCOM2/R6	0
21	R6/R5	0
22	R5/RCOM2	0
23	RCOM1/R4	0
24	R4/R3	0
25	R3/RCOM1	0
26	R2/R2	0
27	R1/R1	0
28	VDD	11.7

IC43

PIN No.	DESCRIPTION	VOLTAGE
1	VDD	4.7
2	XIN	1MHz
3	XOUT	1MHz
4	REQ	REQ
5	SCK	SCK
6	DATA	DATA
7	IDSW	0
8	IDFLAG	4.7
9	TEST1	0
10	TEST2	0
11	DGND	0
12	AGND	0
13	LPF2OUT	2.4
14	LPF2IN	2.4
15	OP2OUT	2.4
16	OP2IN	2.4
17	CC2	0.7
18	CC1	0.7
19	PEF	2.4
20	OP1IN	2.4
21	OP1OUT	2.4
22	LPF1OUT	2.4
23	LPF1IN	2.4
24	VCC	4.7

IC54

PIN No.	DESCRIPTION	VOLTAGE
1	VCC	10.4
2	A OUTPUT	5.2
3	A - INPUT	5.2
4	A + INPUT	5.2
5	VEE	0
6	B + INPUT	5.2
7	B - INPUT	5.2
8	B OUTPUT	5.2
9	VCC	10.4

IC81

PIN No.	DESCRIPTION	VOLTAGE
1	INPUT	18.3
2	GND	0
3	OUTPUT	12

IC82

PIN No.	DESCRIPTION	VOLTAGE
1	GND	0
2	INPUT	-20
3	OUTPUT	-12

IC83

PIN No.	DESCRIPTION	VOLTAGE
1	INPUT	11.5
2	GND	0
3	OUTPUT	5

IC84

PIN No.	DESCRIPTION	VOLTAGE
1	INPUT	10.3
2	GND	0.6
3	OUTPUT	5.6

IC92

PIN No.	DESCRIPTION	VOLTAGE
1	VOUT	5
2	GND	0
3	VCC	5

IC93

PIN No.	DESCRIPTION	VOLTAGE
1	OUT	5
2	VDD	5
3	GND	0

IC51

PIN No.	DESCRIPTION	FM	AM
1	FM IF IN	2.4	1
2	IF BYPASS	2.4	1
3	IF BYPASS	2.4	1
4	GND	0	0
5	FM DET OUT	10.7	10.7
6	FM DET IN	10.7	10.7
7	VCC	10.7	10.7
8	TUNED	0	0
9	AFC	3.7	3.7
10	FM IF	N.C	
11	AM IF	N.C	
12	FM OUT	3.2	3.1
13	STRQ	N.C	
14	AM NARROW	1.2	1.2
15	AM OUT	1.5	2.0
16	FM ADJ	1.5	0.6
17	AM ADJ	0	1.2
18	AM DET IN	2.4	2.0
19	AM AGC	1.5	1.4
20	AM DET OUT	0	10.7
21	AM RF IN	3.9	3.6
22	V REG	3.9	3.6
23	AM OSC IN	3.9	3.6
24	AM OSC OUT	3.2	2.2

IC62 (RDS)

PIN No.	DESCRIPTION	VOLTAGE
1	DK FILTER	1.6
2	Q - DET	1.5
3	RDS ADJ	N.C
4	I - DET	1.4
5	B.P.F CHECK	2.3
6	RDS IN	2.4
7	SK FILTER	2.8
8	RDS FILTER	1.2
9	PLL LOOP FILTER	1.5
10	PLL LOOP FILTER	0
11	FILTER ADJ	0.7
12	GND	0
13	DK - IND	N.C
14	SK - IND	N.C
15	RDS - IND	N.C
16	SK - ADJ	0
17	DATA OUT	DATA
18	CLOCK	CLOCK
19	D - PLL	1.5
20	INTEG/D	1.1
21	B.P.F	2.1
22	B.P.F	2.1
23	VCC	4.3
24	456KHz OSC	456KHz OSC

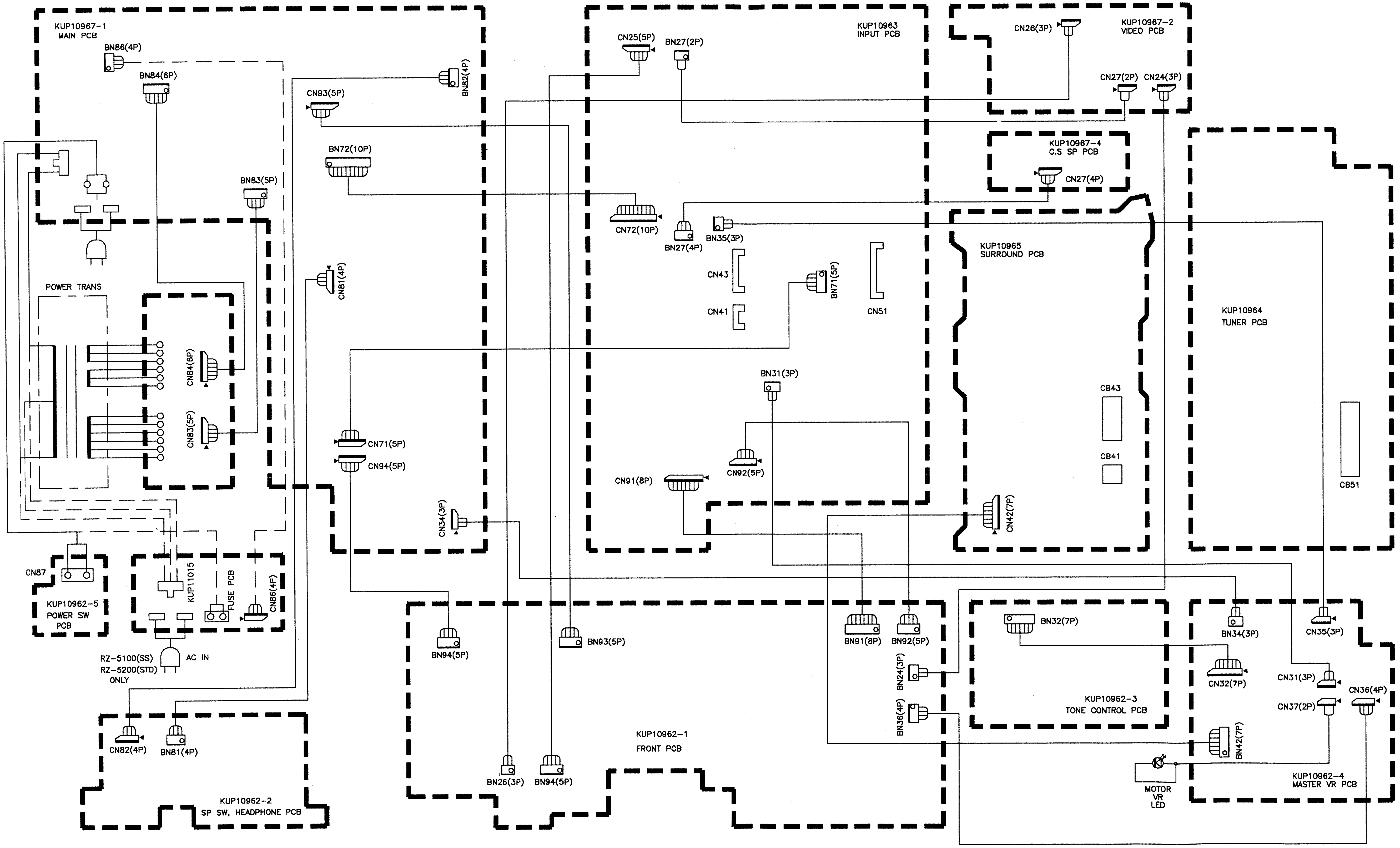
IC53

PIN No.	DESCRIPTION	FM	AM
1	X IN	7.2MHz	
2	X OUT	7.2MHz	
3	CE	CE	
4	CL	CL	
5	DATA	DATA	
6	SYC	N.C	
7	OUT 1	N.C	
8	OUT 2	0	10.7
9	OUT 3	0	3.9
10	AM OSC IN	AM OSC	
11	FM OSC IN	FM OSC	
12	VDD 1	4.8	
13	VDD 2	4.8	
14	PD 1	N.C	
15	PD 2	1.2	
16	GND	0	

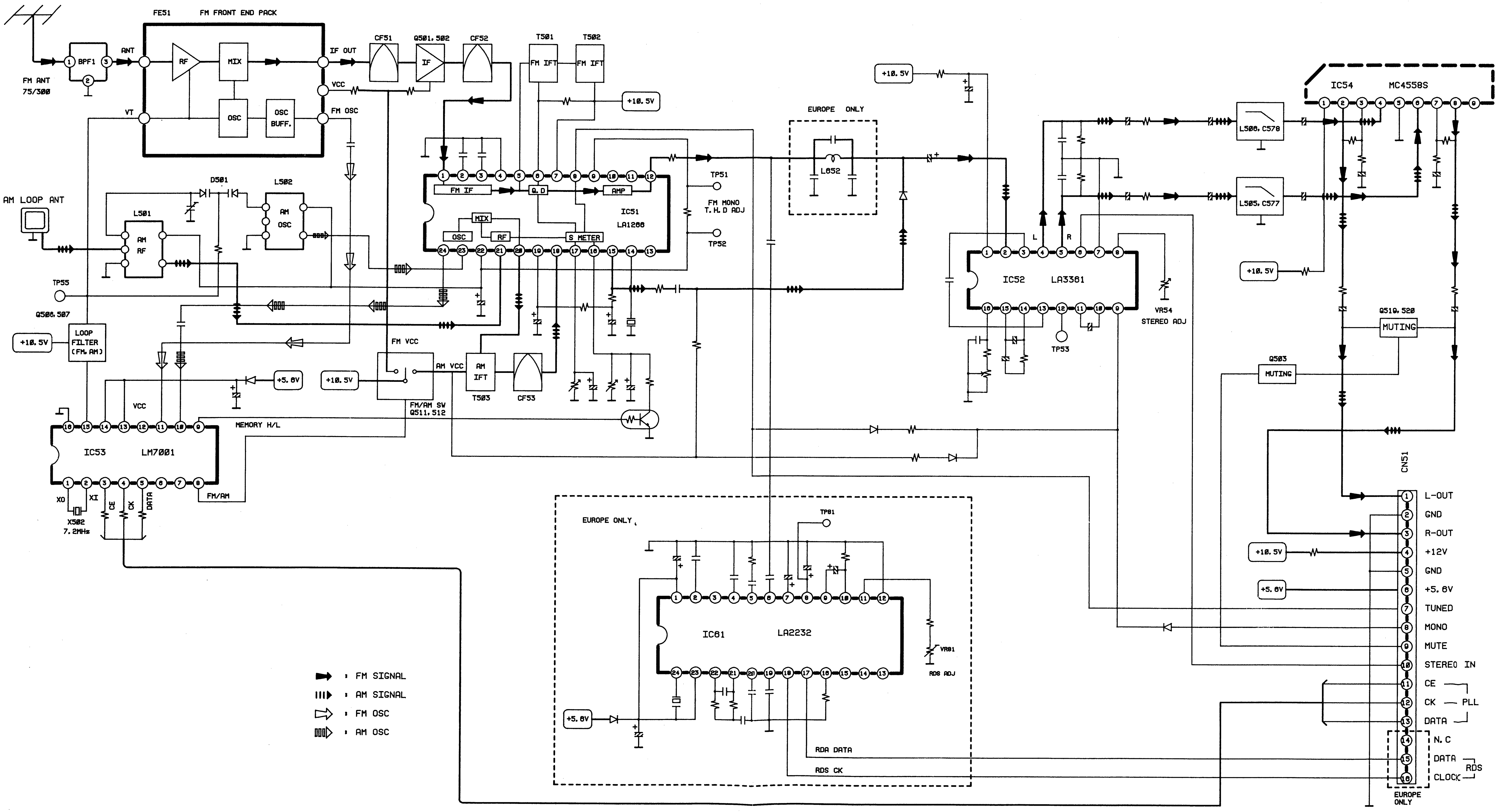
IC52

PIN No.	DESCRIPTION	VOLTAGE
1	VCC	9.7
2	MPX IN	2.4
3	COMP. AMP OUT	1.7
4	L - OUT	1.5
5	R - OUT	1.5
6	STEREO LED	5
7	GND	0
8	SEPA. ADJ	0.5
9	VCO STOP	0.8
10	PILOT FILTER	1.4
11	PILOT FILTER	1.4
12	19KHz CHECK	1
13	PLL IN	1.4
14	PLL FILTER	1.4
15	PLL FILTER	1.4
16	VCO	0.8

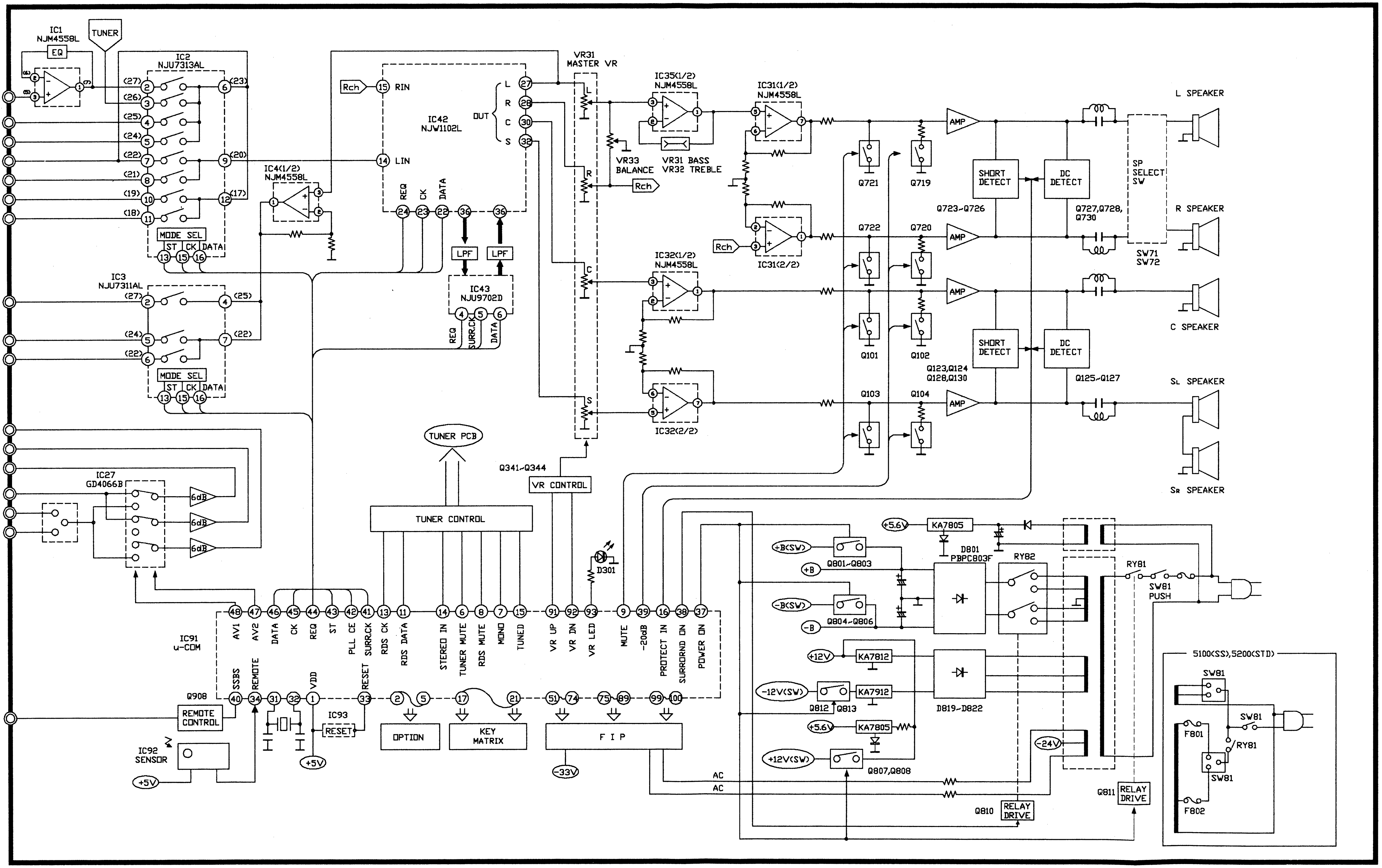
WIRING DIAGRAM


KUP10967-1
MAIN PCB
BN86(4P)
BN84(6P)
CN93(5P)
BN82(4P)
BN72(10P)
BN83(5P)
POWER TRANS
CN84(6P)
CN83(5P)
CN81(4P)
CN71(5P)
CN94(5P)
CN34(3P)
CN87
KUP10962-5
POWER SW
PCB
KUP11015
FUSE PCB
CN86(4P)
RZ-5100(SS)
RZ-5200(STD)
ONLY
AC IN
CN82(4P)
BN81(4P)
KUP10962-2
SP SW, HEADPHONE PCB
CN25(5P)
BN27(2P)
KUP10963
INPUT PCB
CN72(10P)
BN27(4P)
BN35(3P)
CN43
CN41
BN71(5P)
CN51
BN31(3P)
CN92(5P)
CN91(8P)
CN26(3P)
KUP10967-2
VIDEO PCB
CN27(2P)
CN24(3P)
KUP10967-4
C.S SP PCB
CN27(4P)
KUP10965
SURROUND PCB
CB43
CB41
CN42(7P)
KUP10964
TUNER PCB
CB51
BN94(5P)
BN93(5P)
BN91(8P)
BN92(5P)
BN24(3P)
BN36(4P)
KUP10962-1
FRONT PCB
BN26(3P)
BN94(5P)
BN32(7P)
KUP10962-3
TONE CONTROL PCB
BN34(3P)
CN35(3P)
CN32(7P)
CN31(3P)
CN36(4P)
CN37(2P)
BN42(7P)
MOTOR
VR
LED
KUP10962-4
MASTER VR PCB

BLOCK DIAGRAM (TUNER)

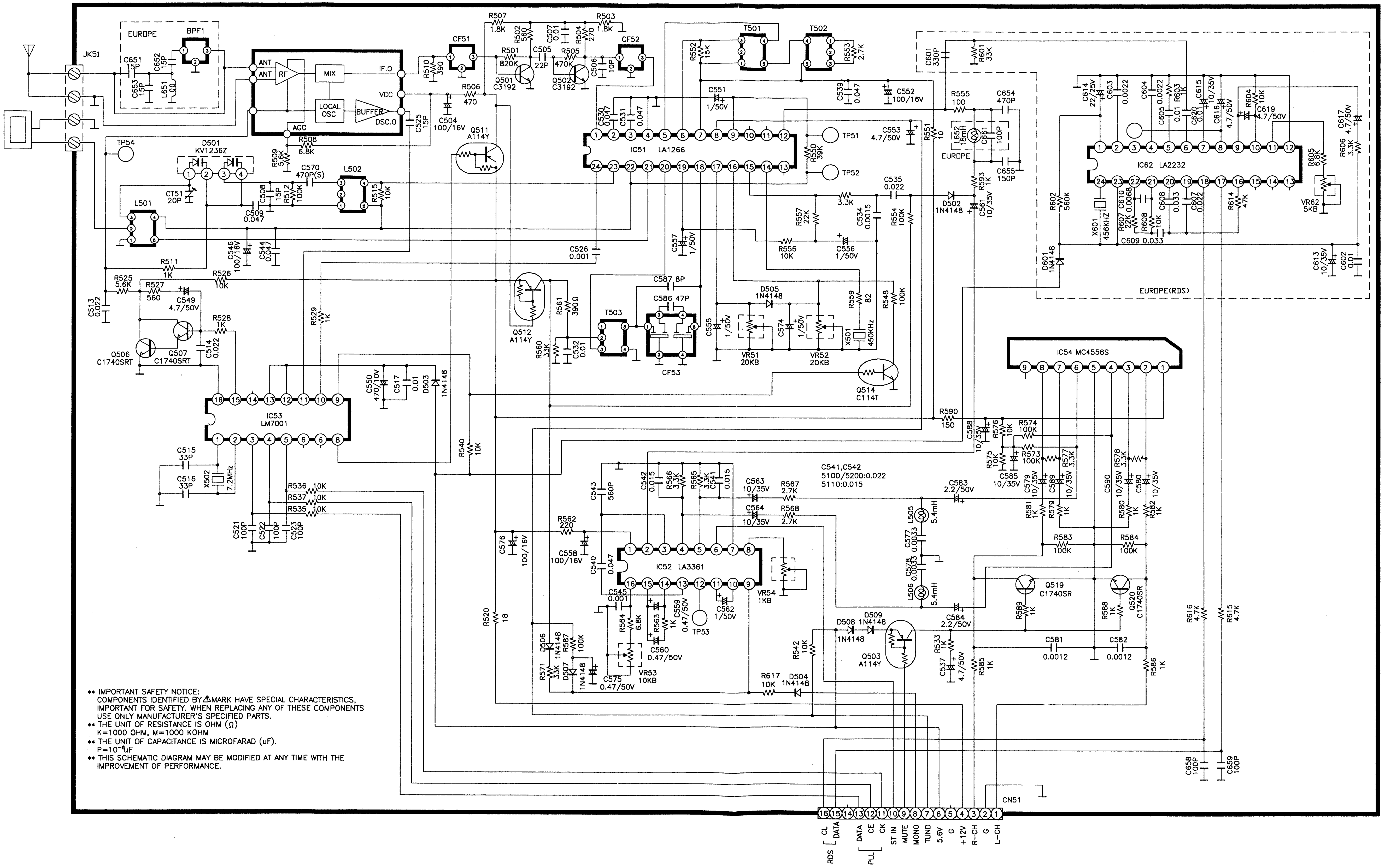

FM ANT
75/300
BPF1
ANT
FE51
FM FRONT END PACK
RF
MIX
OSC
OSC BUFF.
VT
IF OUT
VCC
FM OSC
CF51
Q501, 502
IF
CF52
T501
FM IFT
T502
FM IFT
+10.5V
AM LOOP ANT
D501
L501
AM RF
L502
AM OSC
FM IF
Q.D
AMP
IC51
LA1266
MIX
OSC
RF
S METER
TP51
FM MONO
T.H.D ADJ
TP52
EUROPE ONLY
L652
TP55
Q506, 507
LOOP FILTER (FM, AM)
FM VCC
AM VCC
AM IFT
T503
CF53
FM/AM SW
Q511, 512
+5.6V
VCC
MEMORY H/L
IC53
LM7001
XO
XI
CE
CK
DATA
X502
7.2MHz
FM/AM
IC52
LA3361
L
R
VR54
STEREO ADJ
TP53
IC54
MC4558S
L508, C578
L505, C577
Q519, 520
MUTING
Q503
MUTING
CN51
L-OUT
GND
R-OUT
+12V
GND
+5.6V
TUNED
MONO
MUTE
STEREO IN
CE
CK
DATA
PLL
N.C
DATA
CLOCK
RDS
EUROPE ONLY
EUROPE ONLY
TP61
IC61
LA2232
VR61
RDS ADJ
RDA DATA
RDS CK
: FM SIGNAL
: AM SIGNAL
: FM OSC
: AM OSC

BLOCK DIAGRAM



PHONO
TAPE1 P/B
CD
TAPE2 R/O
TAPE2 P/B
AV1 P/B
AV2 P/B
AUDIO
TAPE1 R/O
AV1 R/O
AV2 R/O
AV1 R/O
AV2 R/O
MONITOR OUT
VIDEO
AV1 P/B
AV2 P/B
F
R
SSBS OUTPUT
IC1
NJM4558L
EQ
TUNER
IC2
NJU7313AL
MODE SEL
ST
CK
DATA
IC3
NJU7311AL
MODE SEL
ST
CK
DATA
IC4(1/2)
NJM4558L
IC27
GD4066B
6dB
6dB
6dB
Rch
RIN
LIN
IC42
NJW1102L
OUT
L
R
C
S
REQ
CK
DATA
LPF
LPF
IC43
NJU9702D
REQ
SURR.CK
DATA
VR31
MASTER VR
L
R
C
S
VR33
BALANCE
VR31 BASS
VR32 TREBLE
Rch
IC35(1/2)
NJM4558L
IC31(1/2)
NJM4558L
Rch
IC31(2/2)
IC32(1/2)
NJM4558L
IC32(2/2)
Q721
Q719
Q722
Q720
Q101
Q102
Q103
Q104
AMP
AMP
AMP
AMP
SHORT DETECT
DC DETECT
Q723~Q726
Q727,Q728,Q730
SHORT DETECT
DC DETECT
Q123,Q124
Q128,Q130
Q125~Q127
SP SELECT SW
SW71
SW72
L SPEAKER
R SPEAKER
C SPEAKER
SL SPEAKER
SR SPEAKER
TUNER PCB
TUNER CONTROL
Q341~Q344
VR CONTROL
D301
IC91
u-COM
AV1
AV2
DATA
CK
REQ
ST
PLL CE
SURR.CK
RDS CK
RDS DATA
STEREO IN
TUNER MUTE
RDS MUTE
MONO
TUNED
VR UP
VR DN
VR LED
MUTE
-20dB
PROTECT IN
SURRORND ON
POWER ON
SSBS
REMOTE
VDD
RESET
Q908
REMOTE CONTROL
IC92
SENSOR
+5V
IC93
RESET
+5V
OPTION
KEY MATRIX
F I P
-33V
+5.6V
KA7805
D801
PBPC803F
+B(SW)
Q801~Q803
+B
-B(SW)
Q804~Q806
-B
RY82
RY81
SW81
PUSH
+12V
KA7812
-12V(SW)
KA7912
Q812
Q813
+5.6V
KA7805
D819~D822
+12V(SW)
Q807,Q808
-24V
AC
AC
Q810
RELAY DRIVE
Q811
RELAY DRIVE
5100(SS),5200(STD)
SW81
SW81
F801
RY81
SW81
F802

SCHEMATIC DIAGRAM (TUNER)


JK51
EUROPE
BPF1
C651 15P
C652 15P
C653 15P
L651
ANT
RF
MIX
LOCAL OSC
BUFFER
IF.O
VCC
DSC.O
AGC
TP54
D501 KV1236Z
CT51 20P
L501
L502
R508 6.8K
C570 470P(S)
CF51
CF52
R507 1.8K
R503 1.8K
Q501 C3192
Q502 C3192
Q511 A114Y
T501
T502
IC51 LA1266
TP51
TP52
C551 1/50V
C552 100/16V
C553 4.7/50V
C535 0.022
D502 1N4148
EUROPE
IC62 LA2232
X601 456KHz
VR62 5KB
EUROPE(RDS)
D601 1N4148
T503
CF53
C587 8P
C586 47P
Q512 A114Y
D505 1N4148
VR51 20KB
VR52 20KB
X501 450KHz
Q514 C114T
IC53 LM7001
X502 7.2MHz
Q506 C1740SRT
Q507 C1740SRT
IC54 MC4558S
IC52 LA3361
C541,C542
5100/5200:0.022
5110:0.015
VR53 10KB
VR54 1KB
TP53
L505 5.4mH
L506 5.4mH
Q503 A114Y
D508 1N4148
D509 1N4148
D504 1N4148
D506 1N4148
D507 1N4148
Q519 C1740SR
Q520 C1740SR
C658 100P
C659 100P
CN51
16 15 14 13 12 11 10 9 8 7 6 5 4 3 2 1
CL
DATA
RDS
DATA
CE
CK
PLL
ST IN
MUTE
MONO
TUND
5.6V
G
+12V
R-CH
G
L-CH

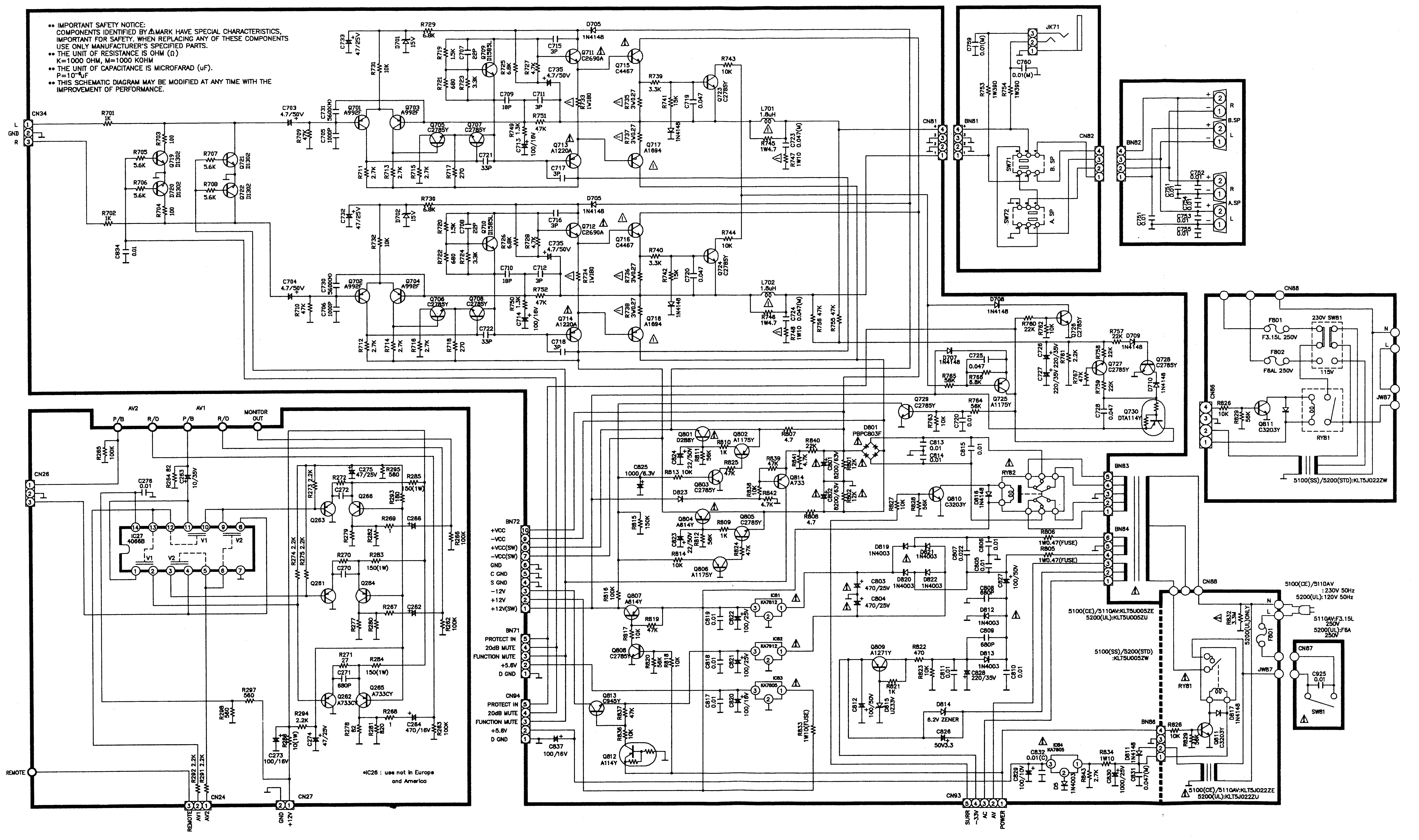
** IMPORTANT SAFETY NOTICE:
COMPONENTS IDENTIFIED BY ⚠ MARK HAVE SPECIAL CHARACTERISTICS, IMPORTANT FOR SAFETY. WHEN REPLACING ANY OF THESE COMPONENTS USE ONLY MANUFACTURER'S SPECIFIED PARTS.

** THE UNIT OF RESISTANCE IS OHM (Ω)
K=1000 OHM, M=1000 KOHM

** THE UNIT OF CAPACITANCE IS MICROFARAD (uF).
P=10^{-6}uF

** THIS SCHEMATIC DIAGRAM MAY BE MODIFIED AT ANY TIME WITH THE IMPROVEMENT OF PERFORMANCE.

SCHEMATIC DIAGRAM (MAIN)



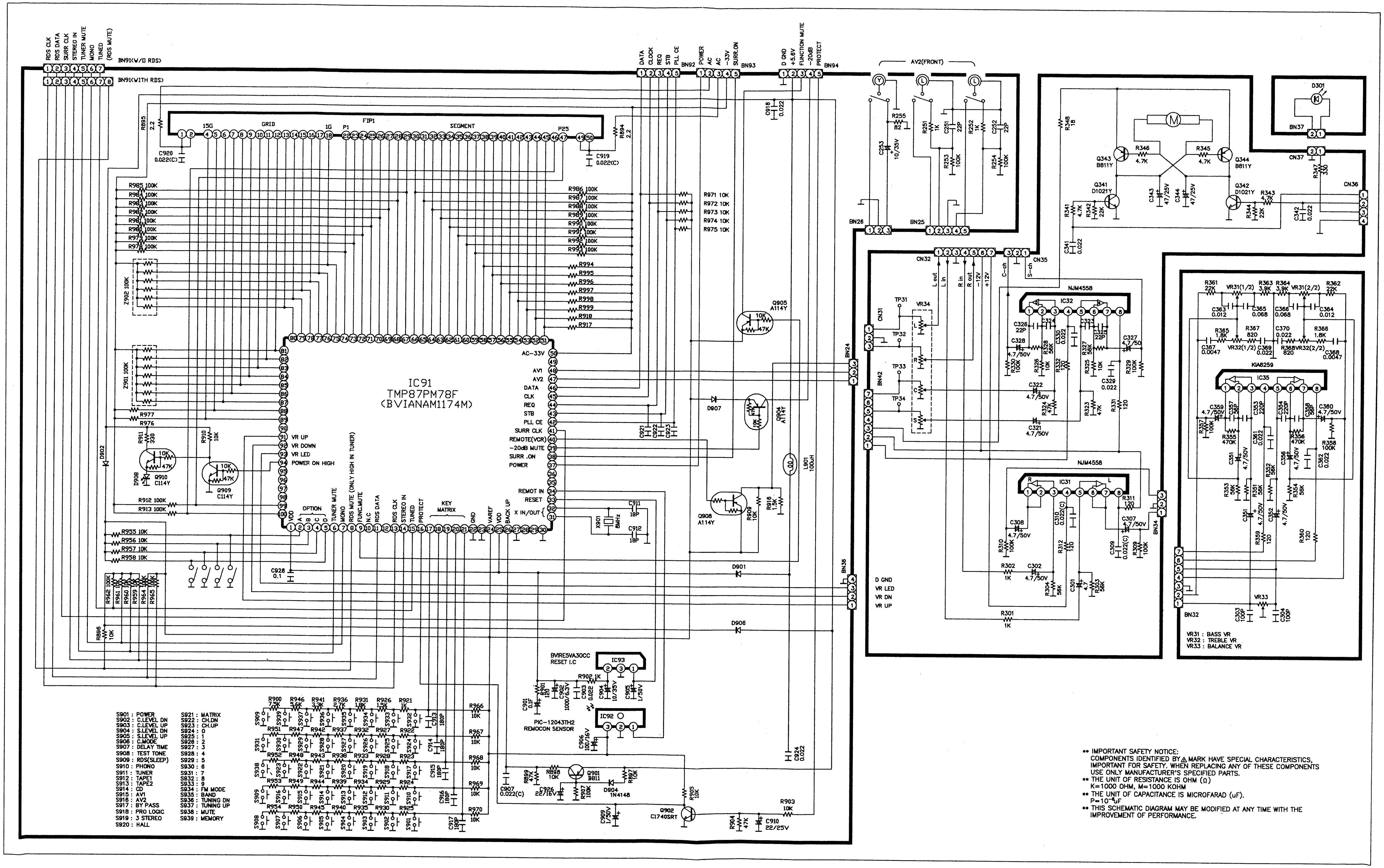
** IMPORTANT SAFETY NOTICE:
COMPONENTS IDENTIFIED BY ⚠ MARK HAVE SPECIAL CHARACTERISTICS, IMPORTANT FOR SAFETY. WHEN REPLACING ANY OF THESE COMPONENTS USE ONLY MANUFACTURER'S SPECIFIED PARTS.

** THE UNIT OF RESISTANCE IS OHM (Ω)
K=1000 OHM, M=1000 KOHM

** THE UNIT OF CAPACITANCE IS MICROFARAD (uF).
P=10^{-6}uF

** THIS SCHEMATIC DIAGRAM MAY BE MODIFIED AT ANY TIME WITH THE IMPROVEMENT OF PERFORMANCE.

CN34
L
GND
R
R701 1K
R702 1K
C834 0.01
C703 4.7/50V
C704 4.7/50V
R709 47K
C731 5600(M)
C705 1000P
Q701 A992F
Q703 A992F
Q702 A992F
Q704 A992F
Q705 C2785Y
Q707 C2785Y
Q706 C2785Y
Q708 C2785Y
R729 6.8K
R730 6.8K
D705 1N4148
Q709 D1585L
Q710 D1585L
Q711 C2690A
Q712 C2690A
Q713 A1220A
Q714 A1220A
Q715 C4467
Q716 C4467
Q717 A1694
Q718 A1694
Q723 C2785Y
Q724 C2785Y
R743 10K
R744 10K
R739 3.3K
R740 3.3K
L701 1.8uH
L702 1.8uH
R745 1W4.7
R746 1W4.7
C723 0.047(M)
C724 0.047(M)
R747 1W10
R748 1W10
CN81
JK71
C759 0.01(M)
C760 0.01(M)
R753 1W390
R754 1W390
BN81
SW71
SW72
B.SP
A.SP
CN82
BN82
R
B.SP
L
R
A.SP
L
C751 0.01
C752 0.01
C753 0.01
C755 0.01
AV2
AV1
P/B
R/D
P/B
R/D
MONITOR OUT
CN26
R265 100K
C276 0.01
C283 10/35V
IC27 4066B
V1
V2
Q263
Q266
Q261
Q264
Q262 A733CY
Q265 A733CY
R271 27
R284 150(1W)
R283 150(1W)
R285 150(1W)
C273 100/16V
C274 47/25V
C284 470/16V
R297 560
R298 560
R292 2.2K
R291 2.2K
CN24
REMOTE
AV1
AV2
CN27
GND
+12V
*IC26 : use not in Europe and America
BN72
+VCC
−VCC
+VCC(SW)
−VCC(SW)
GND
C GND
S GND
−12V
+12V
+12V(SW)
BN71
PROTECT IN
20dB MUTE
FUNCTION MUTE
+5.6V
D GND
CN94
PROTECT IN
20dB MUTE
FUNCTION MUTE
+5.6V
D GND
C837 100/16V
Q801 D288Y
Q802 A1175Y
Q803 C2785Y
Q804 A814Y
Q805 C2785Y
Q806 A1175Y
Q807 A814Y
Q808 C2785Y
Q809 A1271Y
Q812 A114Y
Q813 C945Y
Q814 A733
C825 1000/6.3V
D801 PBPC803F
IC81 KA7812
IC82 KA7912
IC83 KA7805
IC84 KA7805
C803 470/25V
C804 470/25V
D819 1N4003
D820 1N4003
D821 1N4003
D822 1N4003
D812 1N4003
D813 1N4003
D814 6.2V ZENER
C826 50V3.3
C828 220/35V
R833 1W10(FUSE)
D708 1N4148
D707 1N4148
D709 1N4148
D710 1N4148
Q725 A1175Y
Q726 C2785Y
Q727 C2785Y
Q728 C2785Y
Q729 C2785Y
Q730 DTA114Y
Q810 C3203Y
RY82
BN83
BN84
R806 1W0.47(FUSE)
R805 1W0.47(FUSE)
CN88
FB01 F3.15L 250V
FB02 F6AL 250V
230V SW81
115V
JW87
RYB1
R826 10K
R829 56K
Q811 C3203Y
5100(SS)/5200(STD):KLT5J022ZW
5100(CE)/5110AV : 230V 50Hz
5200(UL): 120V 50Hz
5110AV:F3.15L 250V
5200(UL):F6A 250V
5100(CE)/5110AV:KLT5U005ZE
5200(UL):KLT5U005ZU
5100(SS)/5200(STD) :KLT5U005ZW
R832 3.3M
5200(UL)ONLY
F801
RY81
CN87
C925 0.01
SW81
BN86
D817 1N4148
D811 1N4148
R834 1W10
R843 2.7K
C830 1000/25V
C831 0.047(M)
C832 0.01(C)
5100(CE)/5110AV:KLT5J022ZE
5200(UL):KLT5J022ZU
CN93
SURR
−33V
AC
AV
POWER


BN91(W/O RDS)
BN91(WITH RDS)
RDS CLK
RDS DATA
SURR CLK
STEREO IN
TUNER MUTE
MONO
TUNED
(RDS MUTE)
DATA
CLOCK
REQ
STB
PLL CE
BN92
POWER
AC
AC
-33V
SURR.ON
BN93
D GND
+5.6V
FUNCTION MUTE
-20dB
PROTECT
BN94
AV2(FRONT)
FIP1
GRID
SEGMENT
IC91
TMP87PM78F
(BVIANAM1174M)
AC-33V
AV1
AV2
DATA
CLK
REQ
STB
PLL CE
SURR CLK
REMOTE(VCR)
-20dB MUTE
SURR .ON
POWER
REMOT IN
RESET
X IN/OUT
VR UP
VR DOWN
VR LED
POWER ON HIGH
OPTION
KEY MATRIX
TUNER MUTE
MONO
RDS MUTE (ONLY HIGH IN TUNER)
FUNC.MUTE
N.C
RDS DATA
RDS CLK
STEREO IN
TUNED
PROTECT
GND
VAREF
VDD
BACK UP
X901
8MHz
BVIRE5VA30CC
RESET I.C
IC93
IC92
PIC-12043TH2
REMOCON SENSOR
Q901 B811
Q902 C1740SRT
D904 1N4148
Q905 A114Y
Q904 A114Y
Q908 A114Y
Q909 C114Y
Q910 C114Y
L901 100uH
D901
D906
D907
D908
D902
Z901 100K
Z902 100K
NJM4558
IC32
IC31
KIA6259
IC35
VR34
VR31(1/2)
VR31(2/2)
VR32(1/2)
VR32(2/2)
VR33
Q341 D1021Y
Q342 D1021Y
Q343 B811Y
Q344 B811Y
D301
BN24
BN25
BN26
BN32
BN34
BN35
BN37
BN42
CN31
CN32
CN35
CN36
CN37
TP31
TP32
TP33
TP34
L out
L in
R in
R out
-12V
+12V
C-ch
S-ch
D GND
VR LED
VR DN
VR UP
VR31 : BASS VR
VR32 : TREBLE VR
VR33 : BALANCE VR

S901 : POWER
S902 : C.LEVEL DN
S903 : C.LEVEL UP
S904 : S.LEVEL DN
S905 : S.LEVEL UP
S906 : C.MODE
S907 : DELAY TIME
S908 : TEST TONE
S909 : RDS(SLEEP)
S910 : PHONO
S911 : TUNER
S912 : TAPE1
S913 : TAPE2
S914 : CD
S915 : AV1
S916 : AV2
S917 : BY PASS
S918 : PRO LOGIC
S919 : 3 STEREO
S920 : HALL

S921 : MATRIX
S922 : CH.DN
S923 : CH.UP
S924 : 0
S925 : 1
S926 : 2
S927 : 3
S928 : 4
S929 : 5
S930 : 6
S931 : 7
S932 : 8
S933 : 9
S934 : FM MODE
S935 : BAND
S936 : TUNING DN
S937 : TUNING UP
S938 : MUTE
S939 : MEMORY

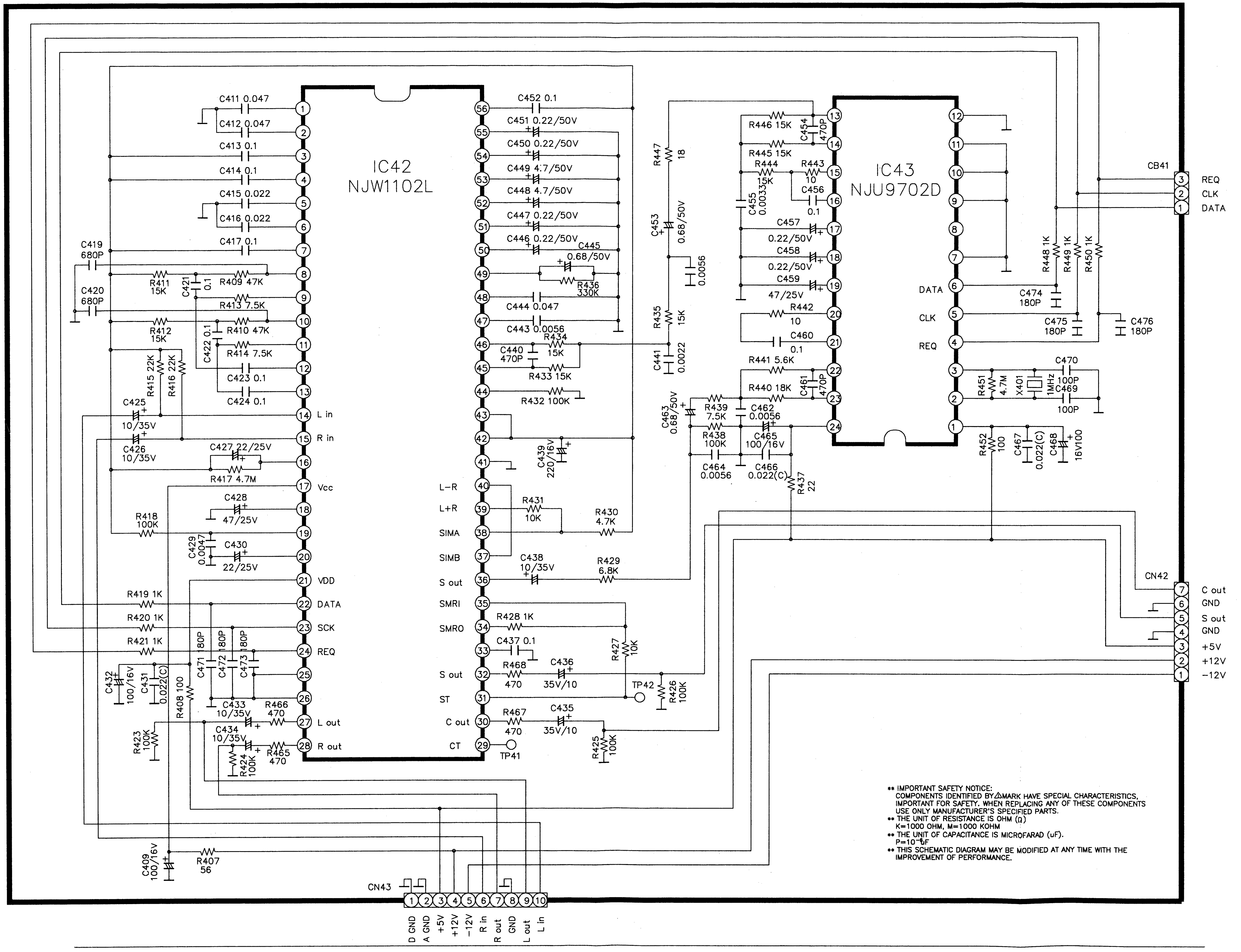
** IMPORTANT SAFETY NOTICE:
COMPONENTS IDENTIFIED BY ⚠ MARK HAVE SPECIAL CHARACTERISTICS, IMPORTANT FOR SAFETY. WHEN REPLACING ANY OF THESE COMPONENTS USE ONLY MANUFACTURER'S SPECIFIED PARTS.

** THE UNIT OF RESISTANCE IS OHM (Ω)
K=1000 OHM, M=1000 KOHM

** THE UNIT OF CAPACITANCE IS MICROFARAD (uF).
P=10^{-6}uF

** THIS SCHEMATIC DIAGRAM MAY BE MODIFIED AT ANY TIME WITH THE IMPROVEMENT OF PERFORMANCE.

SCHEMATIC DIAGRAM (SURROUND)


IC42
NJW1102L
IC43
NJU9702D
C411 0.047
C412 0.047
C413 0.1
C414 0.1
C415 0.022
C416 0.022
C417 0.1
C419 680P
C420 680P
R411 15K
C421 0.1
R409 47K
R413 7.5K
R412 15K
C422 0.1
R410 47K
R414 7.5K
C423 0.1
C424 0.1
R415 22K
R416 22K
C425 10/35V
C426 10/35V
C427 22/25V
R417 4.7M
L in
R in
Vcc
C428 47/25V
R418 100K
C429 0.0047
C430 22/25V
VDD
R419 1K
DATA
R420 1K
SCK
R421 1K
REQ
C471 180P
C472 180P
C473 180P
C432 100/16V
C431 0.022(C)
R408 100
C433 10/35V
R466 470
L out
C434 10/35V
R465 470
R out
R423 100K
R424 100K
C409 100/16V
R407 56
C452 0.1
C451 0.22/50V
C450 0.22/50V
C449 4.7/50V
C448 4.7/50V
C447 0.22/50V
C446 0.22/50V
C445 0.68/50V
R436 330K
C444 0.047
C443 0.0056
R434 15K
C440 470P
R433 15K
R432 100K
C439 220/16V
L−R
L+R
SIMA
SIMB
S out
SMRI
SMRO
S out
ST
C out
CT
R431 10K
R430 4.7K
C438 10/35V
R429 6.8K
R428 1K
C437 0.1
R427 10K
R468 470
C436 35V/10
TP42
R426 100K
R467 470
C435 35V/10
R425 100K
TP41
R447 18
C453 0.68/50V
0.0056
R435 15K
C441 0.0022
R446 15K
C454 470P
R445 15K
R444 15K
R443 10
C455 0.0033
C456 0.1
C457 0.22/50V
C458 0.22/50V
C459 47/25V
R442 10
C460 0.1
R441 5.6K
R440 18K
C461 470P
C463 0.68/50V
R439 7.5K
C462 0.0056
R438 100K
C465 100/16V
C464 0.0056
C466 0.022(C)
R437 22
DATA
CLK
REQ
R448 1K
R449 1K
R450 1K
C474 180P
C475 180P
C476 180P
R451 4.7M
X401 1MHz
C470 100P
C469 100P
R452 100
C467 0.022(C)
C468 16V100
CB41
REQ
CLK
DATA
CN42
C out
GND
S out
GND
+5V
+12V
−12V
CN43
D GND
A GND
+5V
+12V
−12V
R in
R out
GND
L out
L in

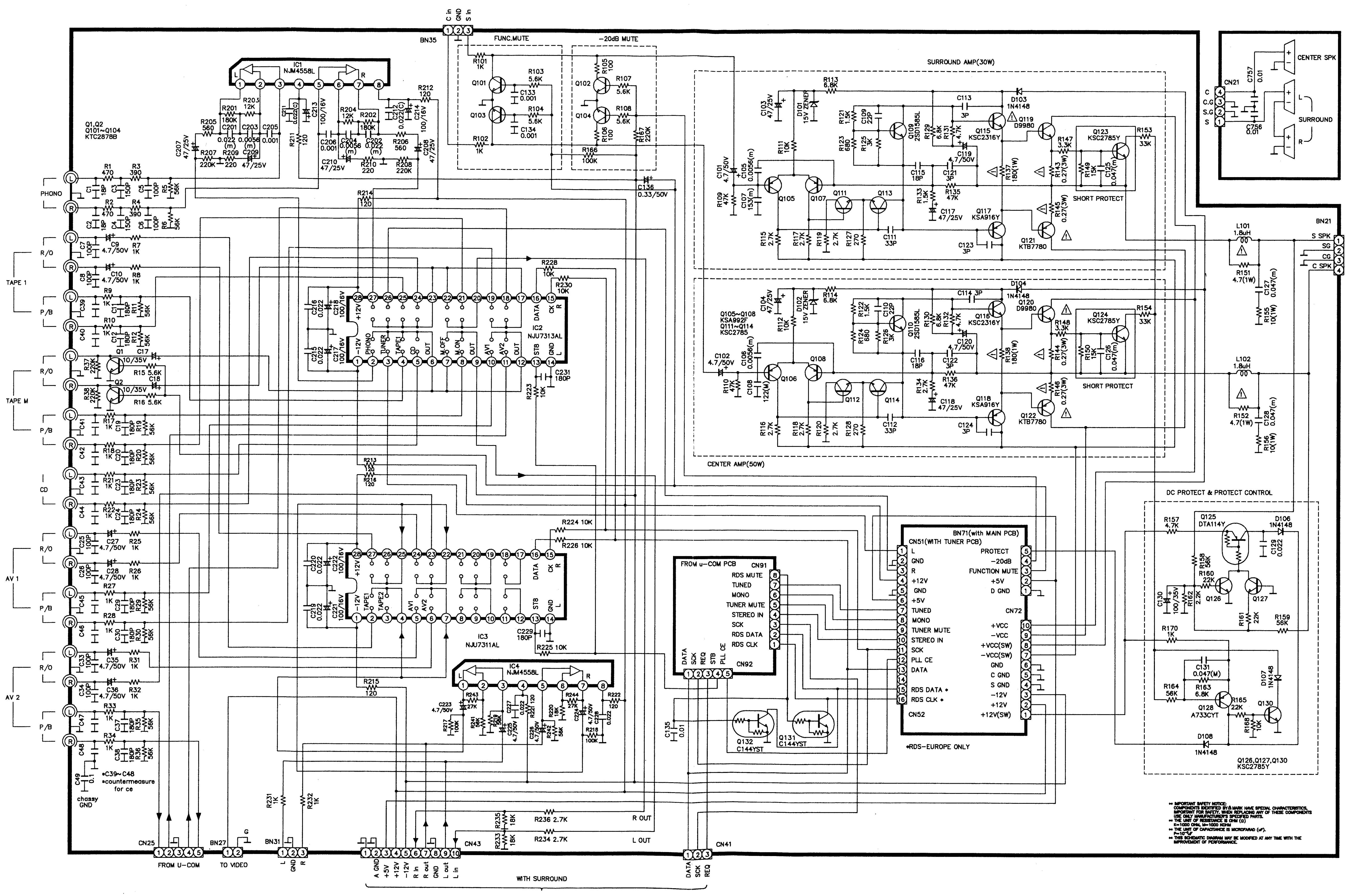
** IMPORTANT SAFETY NOTICE:
COMPONENTS IDENTIFIED BY⚠MARK HAVE SPECIAL CHARACTERISTICS, IMPORTANT FOR SAFETY. WHEN REPLACING ANY OF THESE COMPONENTS USE ONLY MANUFACTURER'S SPECIFIED PARTS.

** THE UNIT OF RESISTANCE IS OHM (Ω)
K=1000 OHM, M=1000 KOHM

** THE UNIT OF CAPACITANCE IS MICROFARAD (uF).
$P=10^{-6}uF$

** THIS SCHEMATIC DIAGRAM MAY BE MODIFIED AT ANY TIME WITH THE IMPROVEMENT OF PERFORMANCE.

SCHEMATIC DIAGRAM (INPUT)


C in
GND
S in
BN35
FUNC.MUTE
-20dB MUTE
SURROUND AMP(30W)
CENTER AMP(50W)
SHORT PROTECT
SHORT PROTECT
CENTER SPK
SURROUND
CN21
C
C.G
S.G
S
C757 0.01
C756 0.01
L
R
BN21
S SPK
SG
CG
C SPK
L101 1.8uH
L102 1.8uH
R151 4.7(1W)
R152 4.7(1W)
C127 0.047(m)
C128 0.047(m)
R155 10(1W)
R156 10(1W)
IC1 NJM4558L
Q1,Q2 Q101~Q104 KTC2878B
PHONO
TAPE 1
TAPE M
CD
AV 1
AV 2
R/O
P/B
IC2 NJU7313AL
IC3 NJU7311AL
IC4 NJM4558L
DATA
CK
STB
GND
PHONO
TUNER
TAPE
OUT
M OFF
M ON
AV1
AV2
TAPE1
TAPE2
+12V
-12V
Q105~Q108 KSA992F
Q111~Q114 KSC2785
Q109 2SD1585L
Q110 2SD1585L
Q115 KSC2316Y
Q116 KSC2316Y
Q117 KSA916Y
Q118 KSA916Y
Q119 D9980
Q120 D9980
Q121 KTB7780
Q122 KTB7780
Q123 KSC2785Y
Q124 KSC2785Y
D101 15V ZENER
D102 15V ZENER
D103 1N4148
D104 1N4148
DC PROTECT & PROTECT CONTROL
Q125 DTA114Y
D106 1N4148
D107 1N4148
D108 1N4148
Q128 A733CYT
Q126,Q127,Q130 KSC2785Y
BN71(with MAIN PCB)
CN51(WITH TUNER PCB)
L
GND
R
+12V
GND
+5V
TUNED
MONO
TUNER MUTE
STEREO IN
SCK
PLL CE
DATA
RDS DATA *
RDS CLK *
CN52
PROTECT
-20dB
FUNCTION MUTE
+5V
D GND
CN72
+VCC
-VCC
+VCC(SW)
-VCC(SW)
GND
C GND
S GND
-12V
+12V
+12V(SW)
*RDS-EUROPE ONLY
FROM u-COM PCB
CN91
RDS MUTE
TUNED
MONO
TUNER MUTE
STEREO IN
SCK
RDS DATA
RDS CLK
CN92
DATA
SCK
REQ
STB
PLL CE
Q132 C144YST
Q131 C144YST
C135 0.01
*C39~C48
*countermeasure for ce
chassy GND
C49 0.1
CN25
FROM U-COM
BN27
G
TO VIDEO
BN31
L
GND
R
CN43
A GND
+5V
+12V
-12V
R in
R out
GND
L out
L in
WITH SURROUND
R236 2.7K
R234 2.7K
R OUT
L OUT
CN41
DATA
SCK
REQ

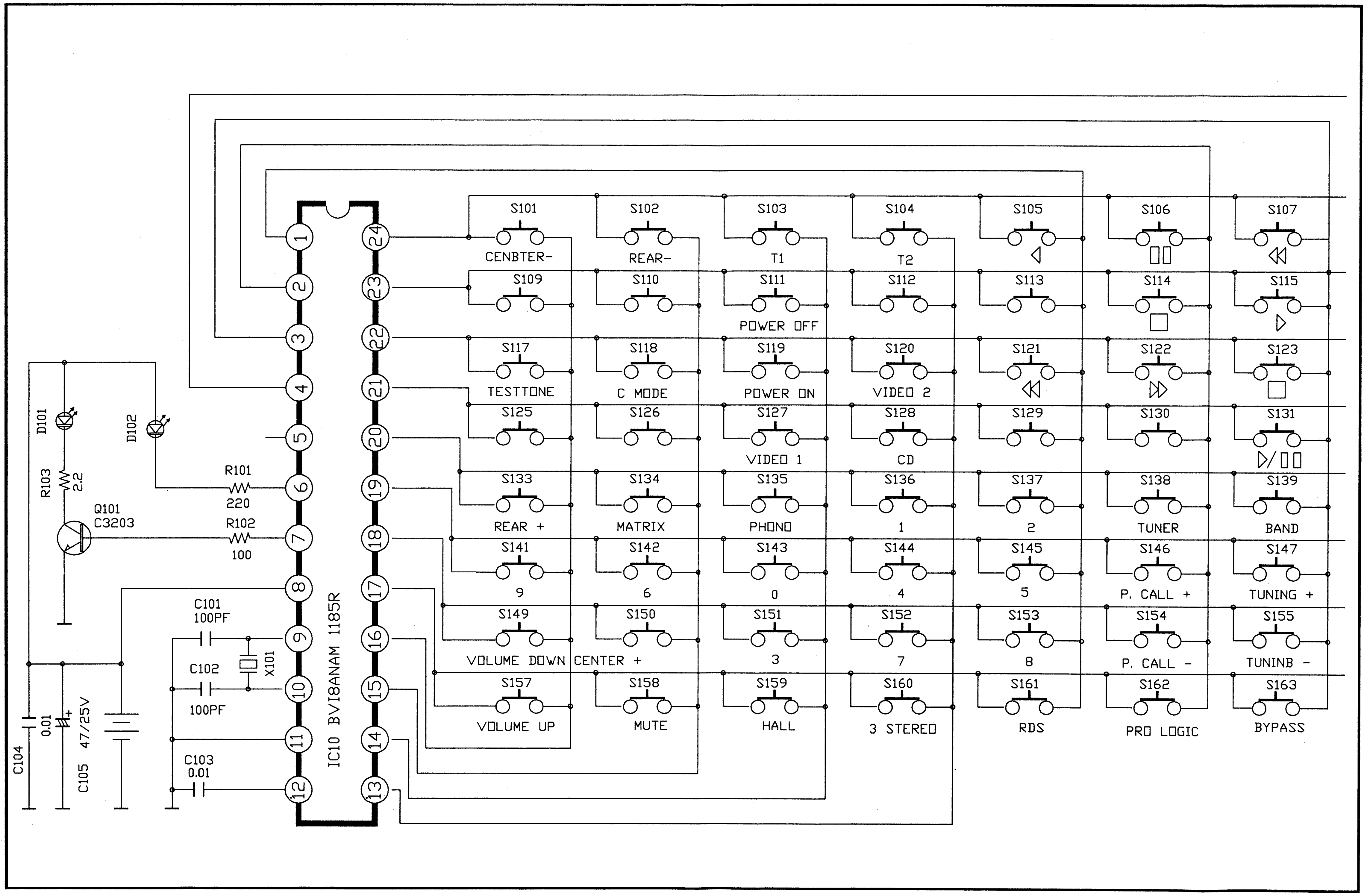
** IMPORTANT SAFETY NOTICE:
COMPONENTS IDENTIFIED BY ⚠ MARK HAVE SPECIAL CHARACTERISTICS,
IMPORTANT FOR SAFETY. WHEN REPLACING ANY OF THESE COMPONENTS
USE ONLY MANUFACTURER'S SPECIFIED PARTS.

** THE UNIT OF RESISTANCE IS OHM (Ω)
K=1000 OHM, M=1000 KOHM

** THE UNIT OF CAPACITANCE IS MICROFARAD (uF).
$P=10^{-6}uF$

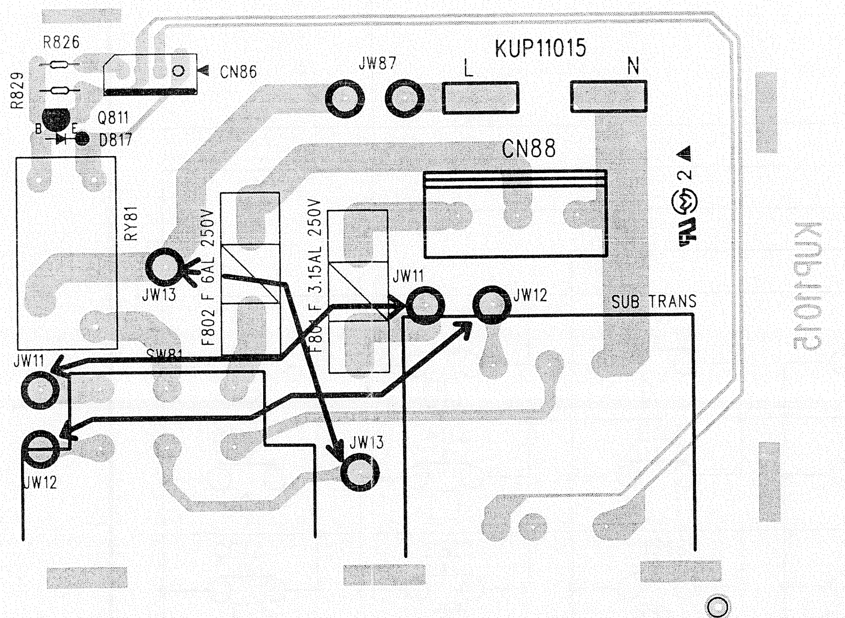
** THIS SCHEMATIC DIAGRAM MAY BE MODIFIED AT ANY TIME WITH THE
IMPROVEMENT OF PERFORMANCE.

SCHEMATIC DIAGRAM (REMOCON)

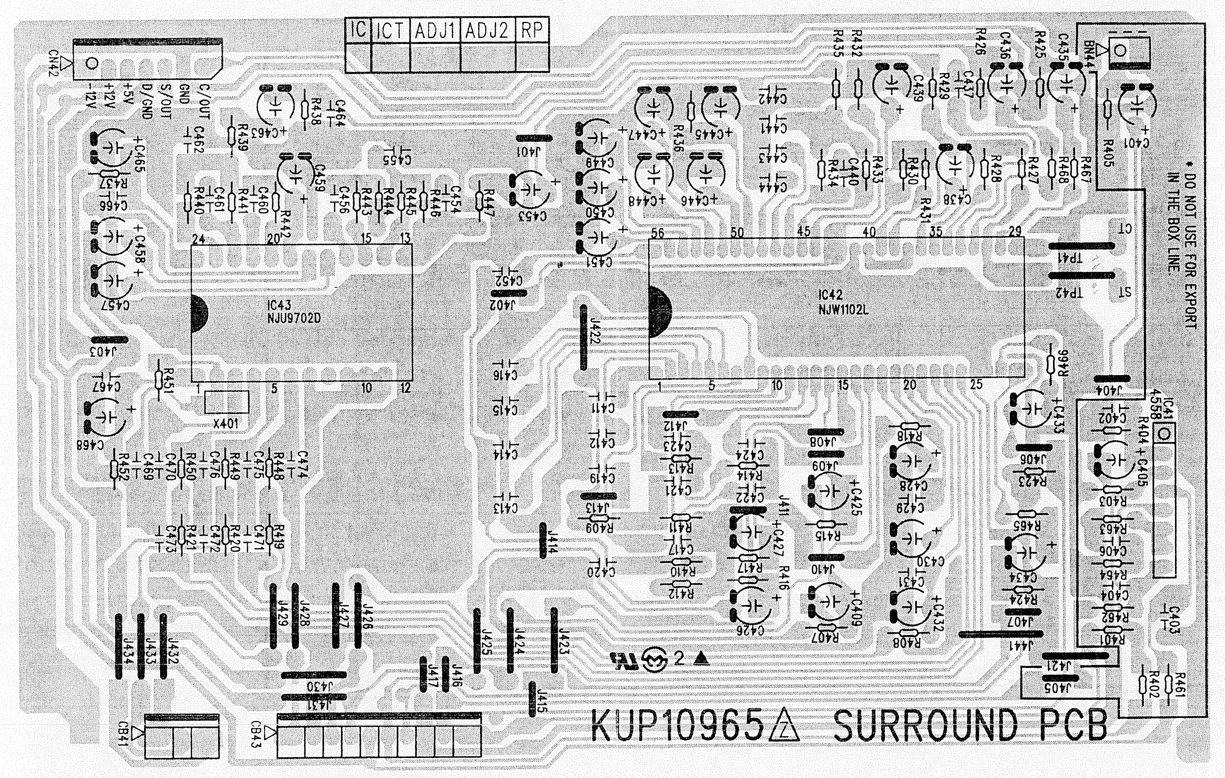

D101
D102
R103
2.2
Q101
C3203
R101
220
R102
100
C101
100PF
C102
100PF
X101
C103
0.01
C104
0.01
C105
47/25V
IC10 BVI8ANAM 1185R
1
2
3
4
5
6
7
8
9
10
11
12
13
14
15
16
17
18
19
20
21
22
23
24
S101
CENBTER-
S102
REAR-
S103
T1
S104
T2
S105
S106
S107
S109
S110
S111
POWER OFF
S112
S113
S114
S115
S117
TESTTONE
S118
C MODE
S119
POWER ON
S120
VIDEO 2
S121
S122
S123
S125
S126
S127
VIDEO 1
S128
CD
S129
S130
S131
S133
REAR +
S134
MATRIX
S135
PHONO
S136
1
S137
2
S138
TUNER
S139
BAND
S141
9
S142
6
S143
0
S144
4
S145
5
S146
P. CALL +
S147
TUNING +
S149
VOLUME DOWN
S150
CENTER +
S151
3
S152
7
S153
8
S154
P. CALL -
S155
TUNINB -
S157
VOLUME UP
S158
MUTE
S159
HALL
S160
3 STEREO
S161
RDS
S162
PRO LOGIC
S163
BYPASS

PRINTED CIRCUIT BOARDS

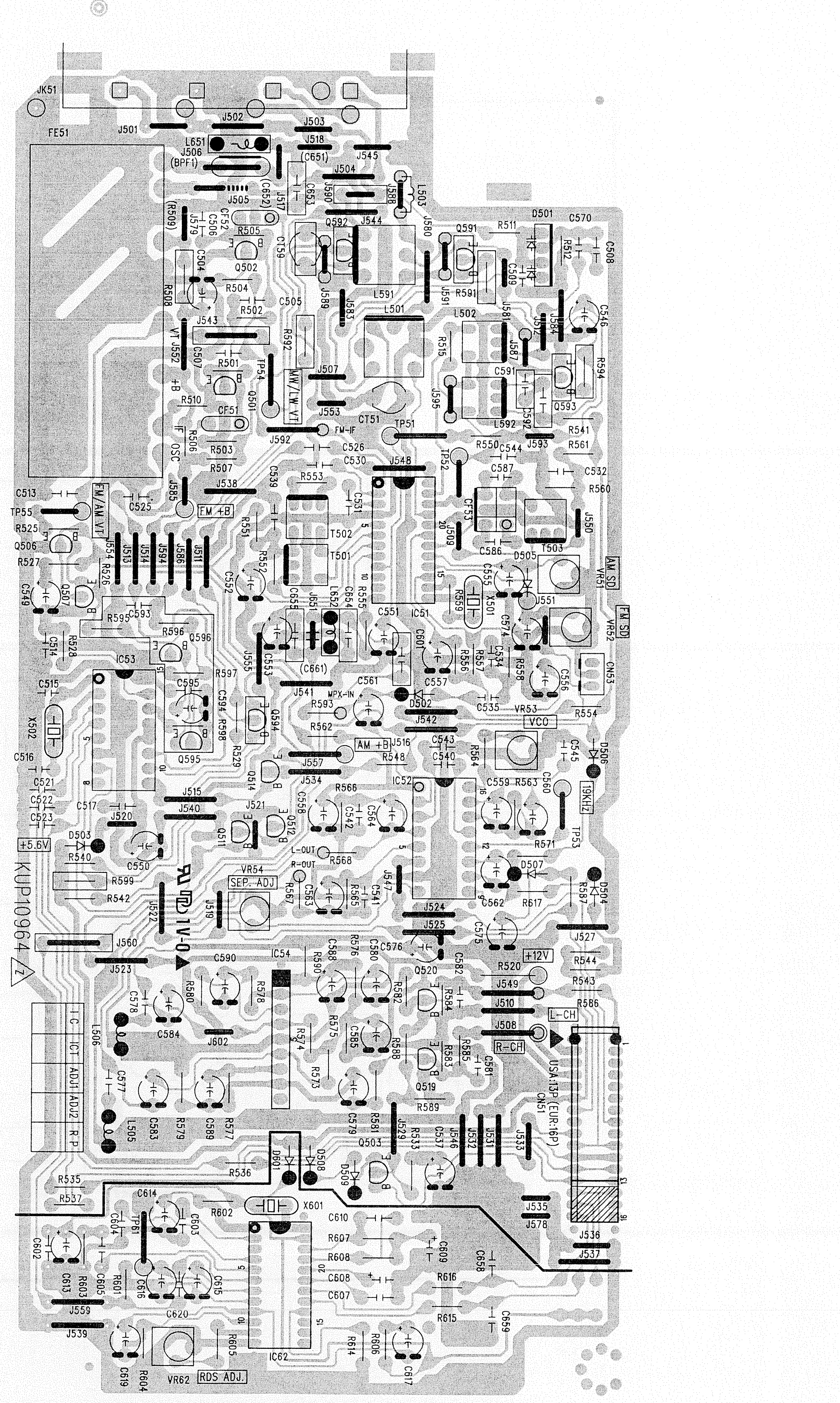
FUSE PCB

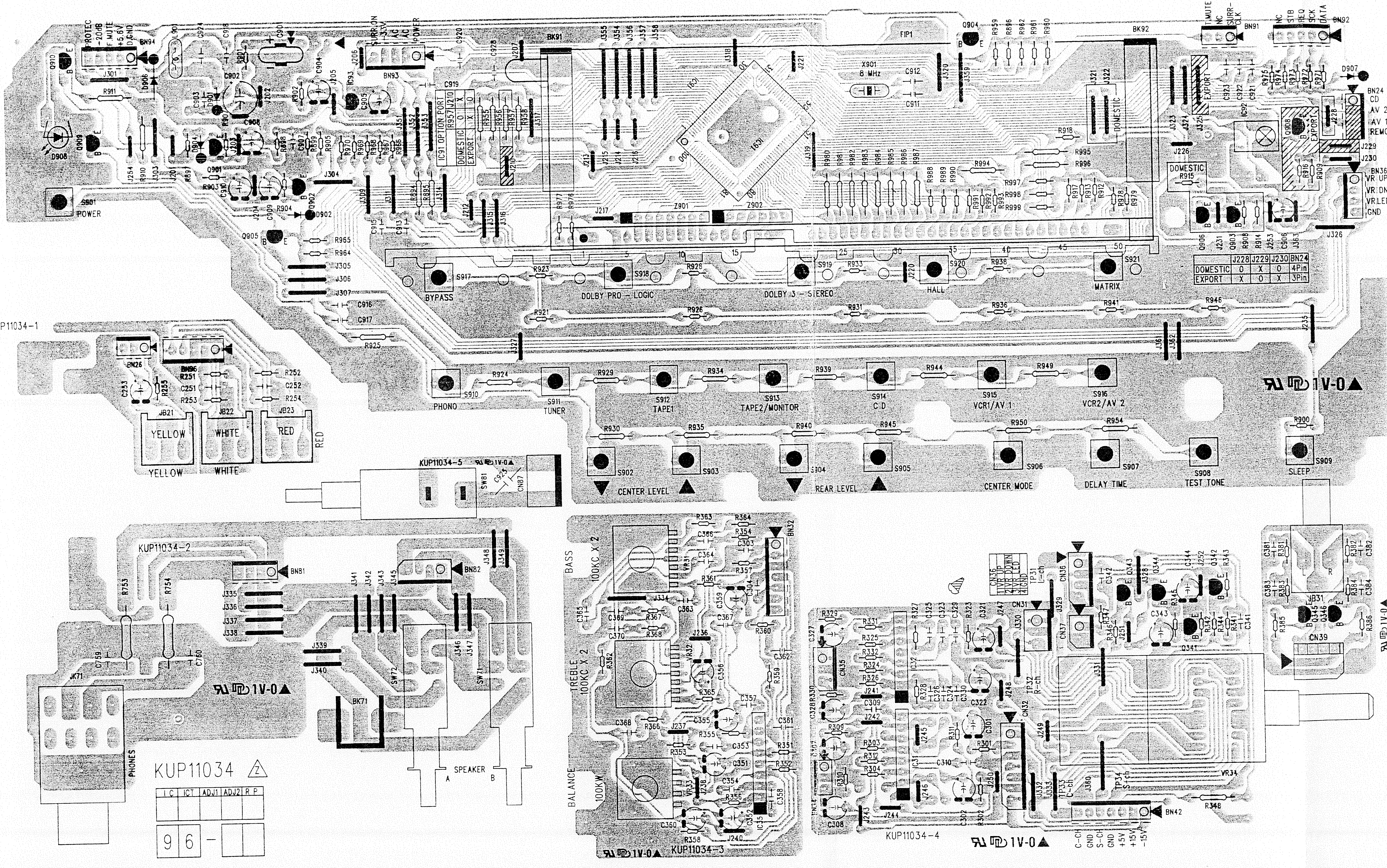

KUP11015
R826
R829
CN86
Q811
D817
JW87
L
N
CN88
RY81
JW13
F802 F 6AL 250V
F801 F 3.15AL 250V
JW11
JW12
SUB TRANS
SW81

SURROUND PCB


IC
ICT
ADJ1
ADJ2
RP
IC43
NJU9702D
IC42
NJW1102L
X401
• DO NOT USE FOR EXPORT IN THE BOX LINE.
KUP10965 SURROUND PCB
CN42
CB41
CB43

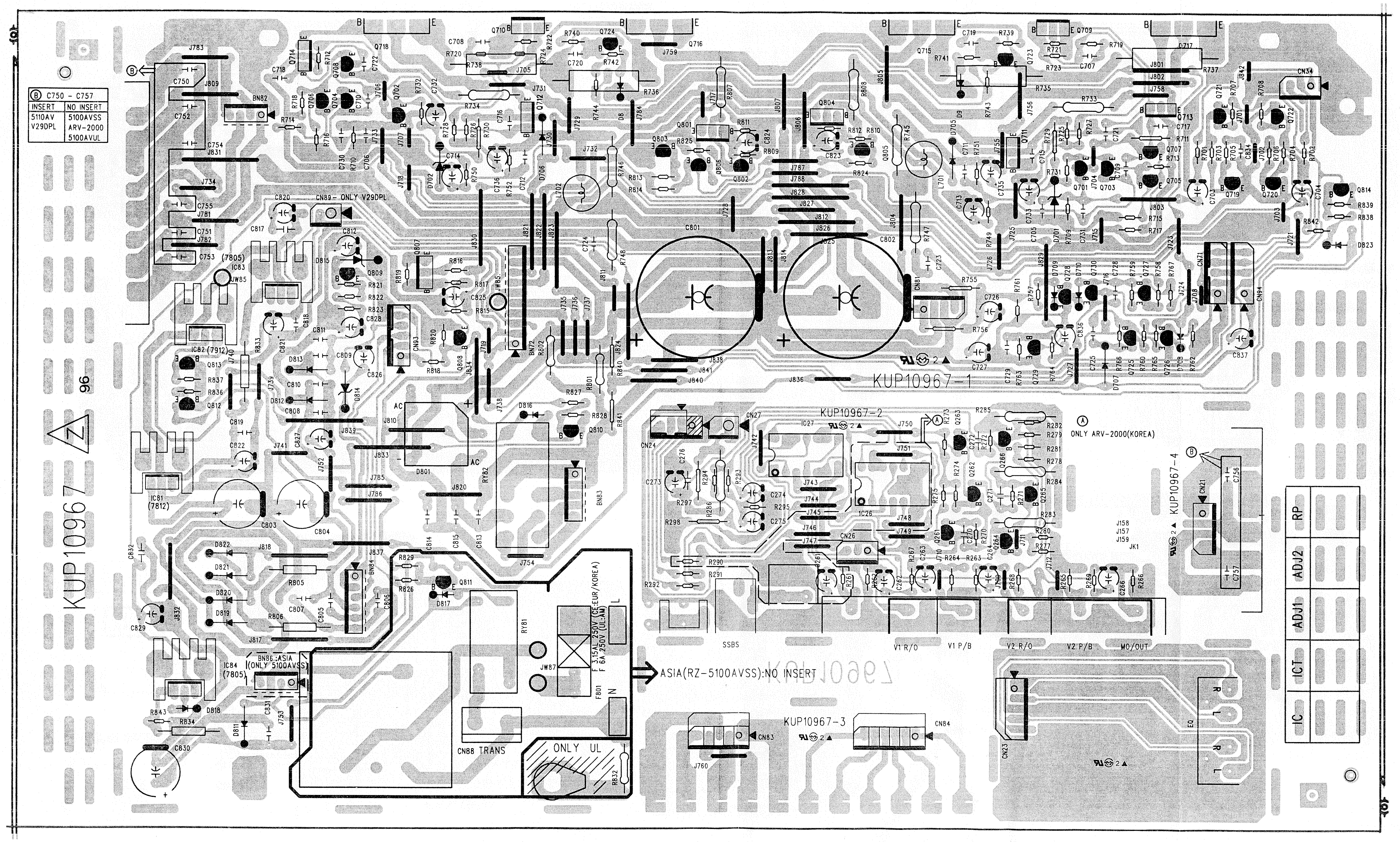
TUNER PCB


JK51
FE51
KUP10964
IC51
IC52
IC53
IC54
IC62
TP51
TP52
FM/AM VT
FM +B
AM +B
+5.6V
+12V
SEP. ADJ.
RDS ADJ.
VCO
19KHz
L-CH
R-CH
AM SD
FM SD
CN51
USA(13P)(EUR.16P)
IC
ICT
ADJ1
ADJ2
R.P
X601
VR54
VR62
VR53

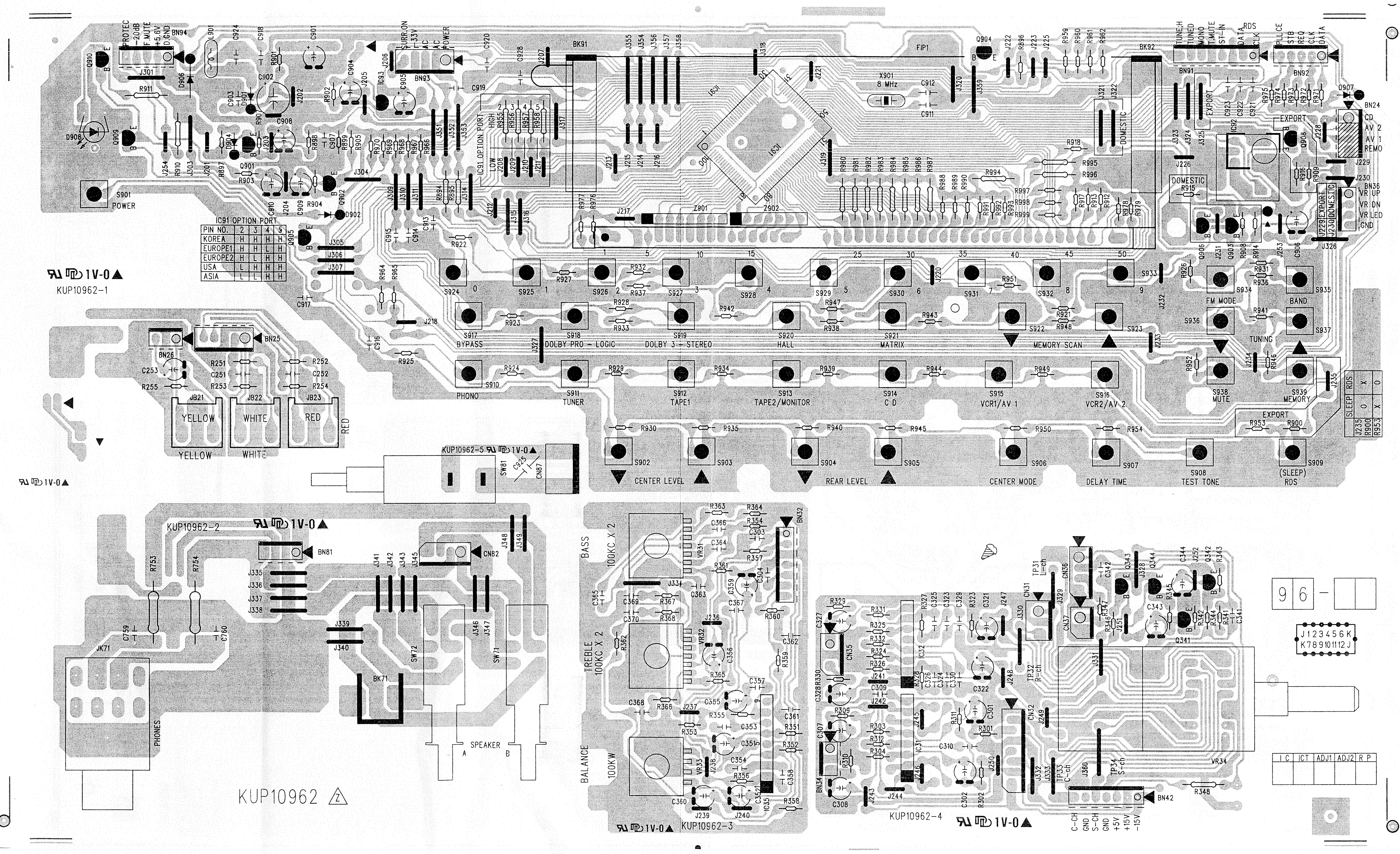

KUP11034-1
KUP11034-2
KUP11034-3
KUP11034-4
KUP11034-5
KUP11034
POWER
BYPASS
DOLBY PRO - LOGIC
DOLBY 3 - STEREO
HALL
MATRIX
PHONO
TUNER
TAPE1
TAPE2/MONITOR
CD
VCR1/AV 1
VCR2/AV 2
CENTER LEVEL
REAR LEVEL
CENTER MODE
DELAY TIME
TEST TONE
SLEEP
YELLOW
WHITE
RED
PHONES
SPEAKER
A
B
BASS
100KC X 2
TREBLE
100KC X 2
BALANCE
100KW
DOMESTIC
EXPORT
IC91 OPTION PORT
X901
8 MHz
CD
AV 2
AV 1
REMO
VR UP
VR DN
VR.LED
GND
C-CH
GND
S-CH
GND
+5V
+15V
-15V
1V-0
I C
ICT
ADJ1
ADJ2
R P
9
6
-

AV-5100 (FRONT PCB)

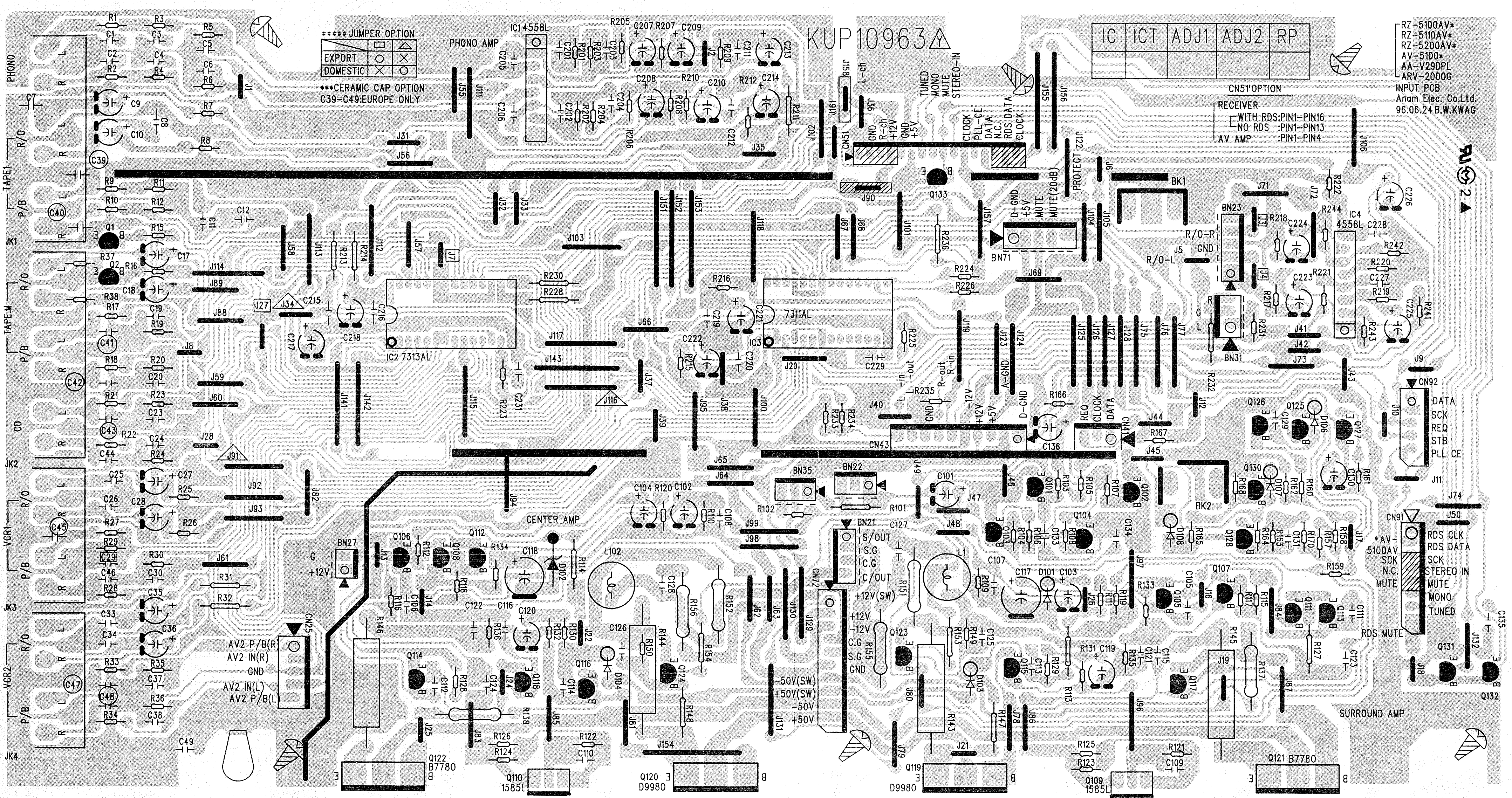
MAIN PCB


Ⓑ C750 - C757
INSERT
5110AV
V29DPL
NO INSERT
5100AVSS
ARV-2000
5100AVUL
KUP10967
KUP10967-1
KUP10967-2
KUP10967-3
KUP10967-4
Ⓐ ONLY ARV-2000(KOREA)
CN89 - ONLY V29DPL
BN86 : ASIA (ONLY 5100AVSS)
ASIA(RZ-5100AVSS):NO INSERT
F 3.15AL 250V (CE/EUR/KOREA)
F 6A 250V (UL-AM)
CN88 TRANS
ONLY UL
IC81 (7812)
IC82 (7912)
IC83 (7805)
IC84 (7805)
SSBS
V1 R/O
V1 P/B
V2 R/O
V2 P/B
MO/OUT
RP
ADJ2
ADJ1
ICT
IC
EQ

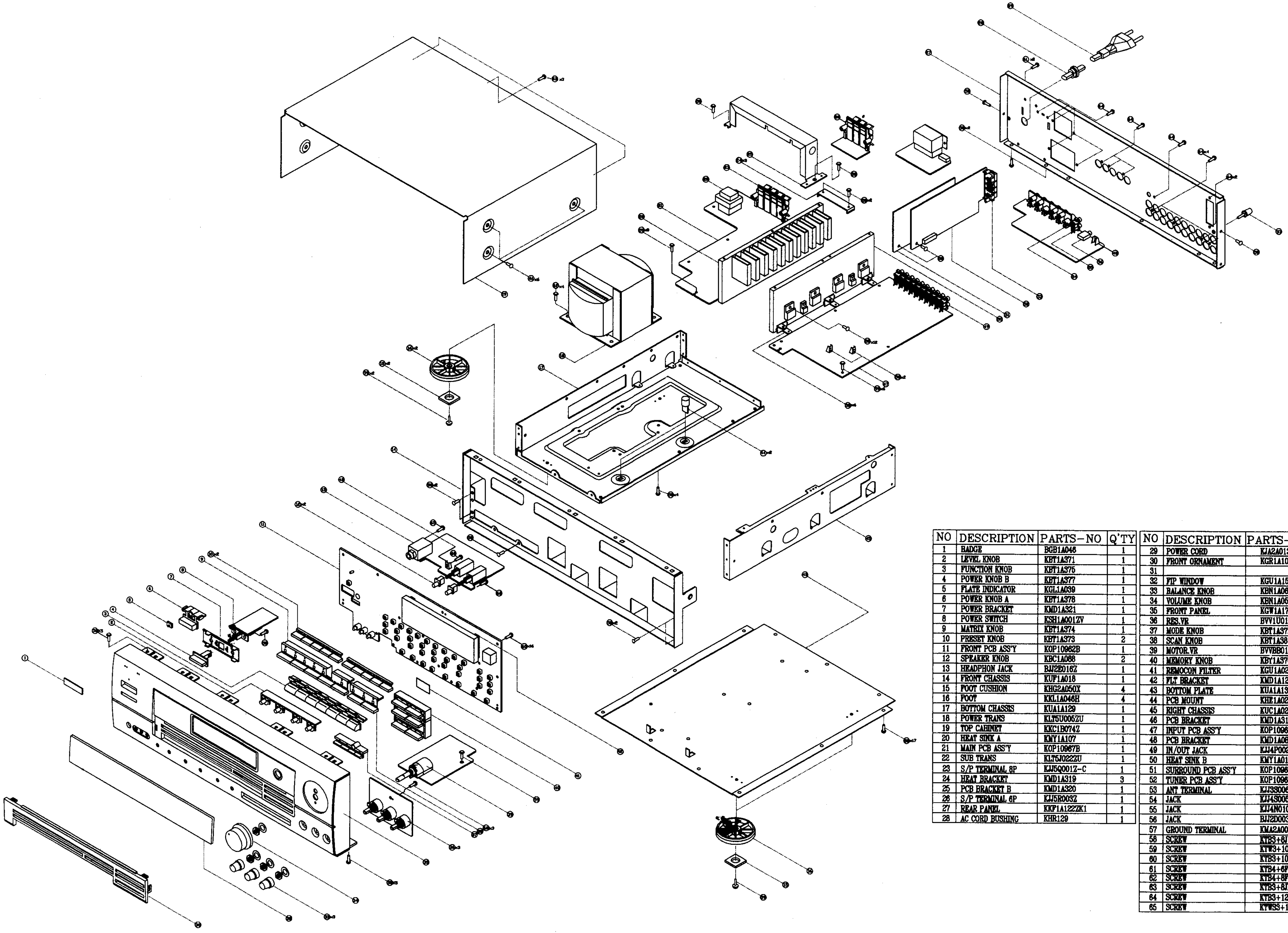
FRONT PCB


POWER
S901
BN94
PROTEC
-20dB
F MUTE
+5.6V
D.GND
BN93
SURR.ON
-33V
AC
AC
POWER
IC91 OPTION PORT
HIGH
LOW
BK91
FIP1
X901
8 MHz
BK92
BN91
TUNE:H
TUNED
MONO
FM.MUTE
ST-IN
RDS
DATA
CLK
BN92
PLLCE
STB
REQ
CLK
DATA
BN24
CD
AV 2
AV 1
REMO
BN36
VR UP
VR DN
VR LED
GND
EXPORT
DOMESTIC
IC91 OPTION PORT
PIN NO. | 2 | 3 | 4 | 5
KOREA | H | H | H | H
EUROPE1 | H | H | L | H
EUROPE2 | H | L | H | H
USA | L | H | H | H
ASIA | L | L | H | H
1V-0▲
KUP10962-1
BYPASS
DOLBY PRO - LOGIC
DOLBY 3 - STEREO
HALL
MATRIX
MEMORY SCAN
FM MODE
BAND
TUNING
PHONO
TUNER
TAPE1
TAPE2/MONITOR
C D
VCR1/AV 1
VCR2/AV 2
MUTE
MEMORY
SLEEP
RDS
J235
R900
R953
CENTER LEVEL
REAR LEVEL
CENTER MODE
DELAY TIME
TEST TONE
(SLEEP)
RDS
BN25
BN26
YELLOW
WHITE
RED
KUP10962-5
SW81
CN87
KUP10962-2
BN81
CN82
JK71
PHONES
BK71
SW72
SW71
SPEAKER
A
B
KUP10962
BASS
100KC X 2
TREBLE
100KC X 2
BALANCE
100KW
KUP10962-3
BN32
TP31
L-ch
TP32
R-ch
TP33
C-ch
TP34
S-ch
CN31
CN32
CN35
CN36
CN37
BN34
BN42
KUP10962-4
C-CH
GND
S-CH
GND
+5V
+15V
-15V
VR34
96-
J123456K
K789101112J
IC
ICT
ADJ1
ADJ2
R P

INPUT PCB

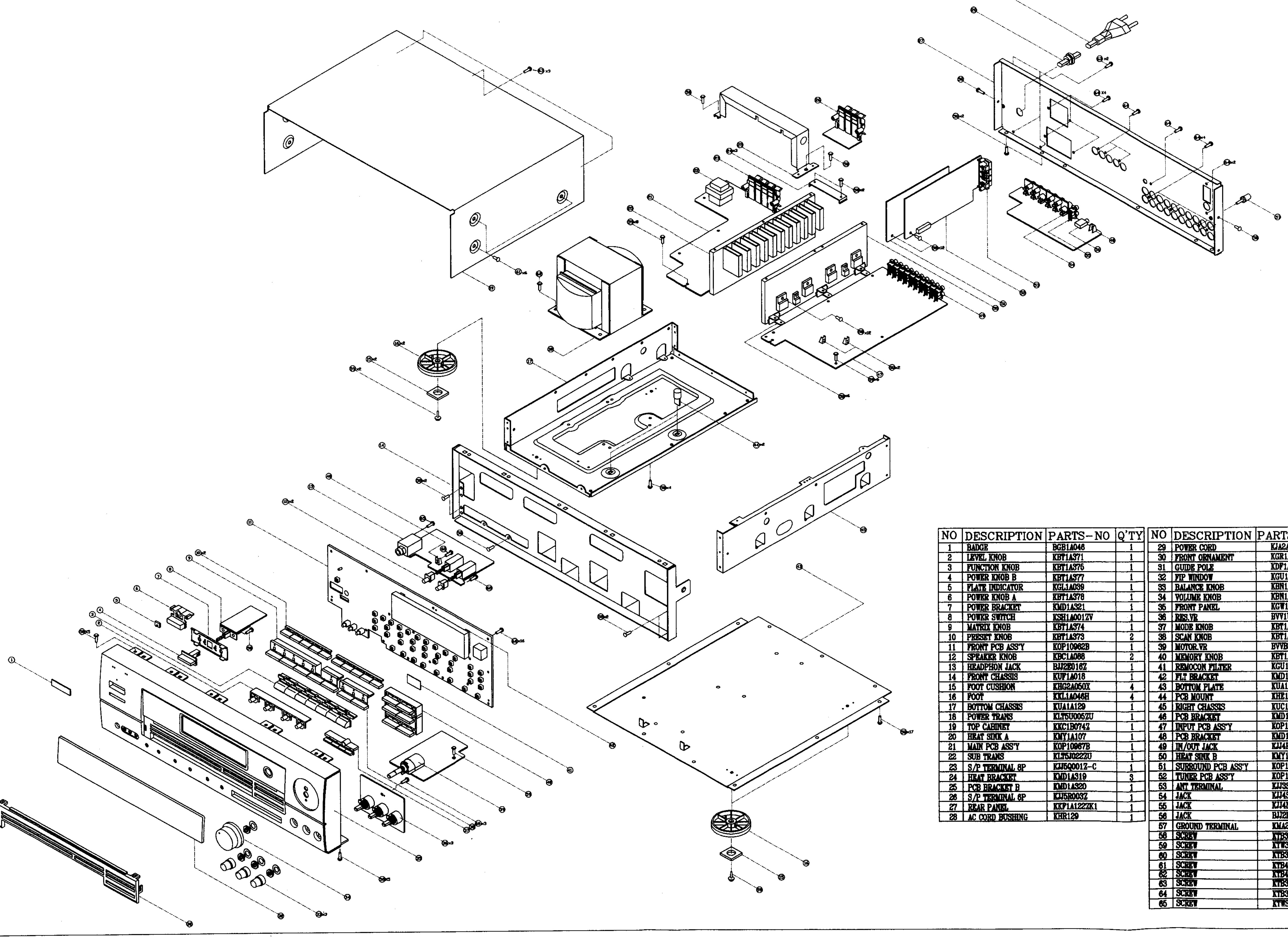

KUP10963⚠
***** JUMPER OPTION
EXPORT ○ ×
DOMESTIC × ○
***CERAMIC CAP OPTION
C39–C49:EUROPE ONLY
PHONO AMP
IC1 4558L
IC2 7313AL
IC3 7311AL
IC4 4558L
CENTER AMP
SURROUND AMP
IC ICT ADJ1 ADJ2 RP
CN51'OPTION
RECEIVER
WITH RDS:PIN1–PIN16
NO RDS :PIN1–PIN13
AV AMP :PIN1–PIN4
RZ-5100AV*
RZ-5110AV*
RZ-5200AV*
AV-5100*
AA-V29DPL
ARV-2000G
INPUT PCB
Anam Elec. Co.Ltd.
96.06.24 B.W.KWAG
PHONO
TAPE1
TAPE.M
CD
VCR1
VCR2
JK1
JK2
JK3
JK4
R/O
P/B
AV2 P/B(R)
AV2 IN(R)
GND
AV2 IN(L)
AV2 P/B(L)
TUNED
MONO
MUTE
STEREO-IN
CLOCK
PLL-CE
DATA
N.C.
RDS DATA
RDS CLOCK
PROTECT
MUTE(20dB)
D-GND
+5V
R/O-R
R/O-L
GND
S/OUT
S.G
C.G
C/OUT
+12V(SW)
+12V
-12V
-50V(SW)
+50V(SW)
-50V
+50V
SCK
REQ
STB
PLL CE
RDS CLK
RDS DATA
STEREO IN
RDS MUTE
*AV-5100AV
Q120 D9980
Q119 D9980
Q121 B7780
Q122 B7780
Q110 1585L
Q109 1585L

EXPLODED VIEW (RZ-5100AV)



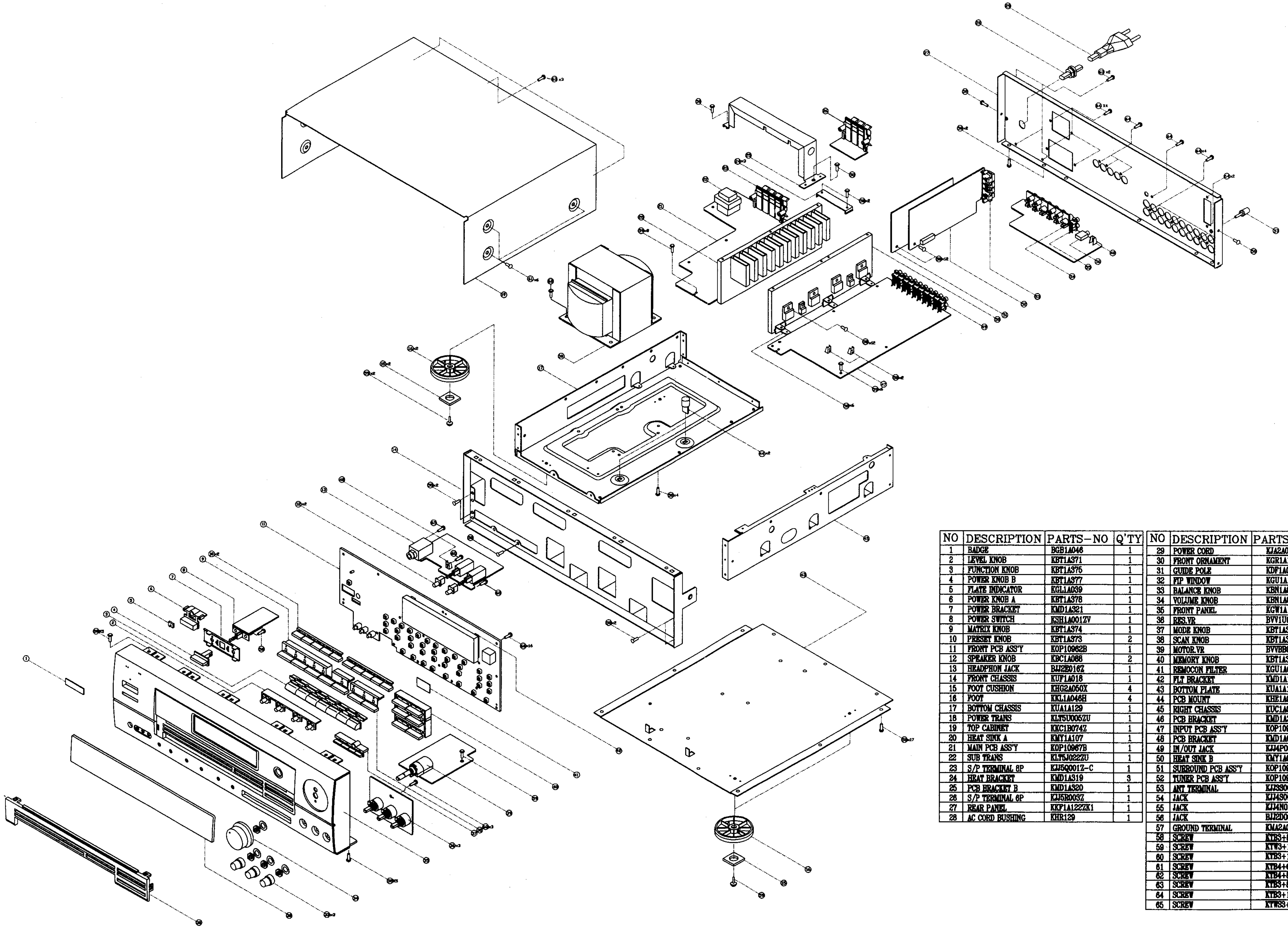
NO	DESCRIPTION	PARTS-NO	Q'TY
1	BADGE	BGB1A046	1
2	LEVEL KNOB	KBT1A371	1
3	FUNCTION KNOB	KBT1A375	1
4	POWER KNOB B	KBT1A377	1
5	FLATE INDICATOR	KGL1A039	1
6	POWER KNOB A	KBT1A378	1
7	POWER BRACKET	KMD1A321	1
8	POWER SWITCH	KSH1A001ZV	1
9	MATRIX KNOB	KBT1A374	1
10	PRESET KNOB	KBT1A373	2
11	FRONT PCB ASS'Y	KOP10962B	1
12	SPEAKER KNOB	KBC1A068	2
13	HEADPHON JACK	BJJ2E016Z	1
14	FRONT CHASSIS	KUF1A018	1
15	FOOT CUSHION	KHG2A050X	4
16	FOOT	KKL1A046H	4
17	BOTTOM CHASSIS	KUA1A129	1
18	POWER TRANS	KLT5U005ZU	1
19	TOP CABINET	KKC1B074Z	1
20	HEAT SINK A	KMY1A107	1
21	MAIN PCB ASS'Y	KOP10967B	1
22	SUB TRANS	KLT5J022ZU	1
23	S/P TERMINAL 8P	KJJ5Q001Z--C	1
24	HEAT BRACKET	KMD1A319	3
25	PCB BRACKET B	KMD1A320	1
26	S/P TERMINAL 6P	KJJ5R003Z	1
27	REAR PANEL	KKF1A122ZK1	1
28	AC CORD BUSHING	KHR129	1
29	POWER CORD	KJA2A013Z	1
30	FRONT ORNAMENT	KGR1A101Z	1
31			
32	FIP WINDOW	KGU1A151Z	1
33	BALANCE KNOB	KBN1A067	3
34	VOLUME KNOB	KBN1A055	1
35	FRONT PANEL	KGW1A174	1
36	RES.VR	BVV1U01W104Z	1
37	MODE KNOB	KBT1A372	1
38	SCAN KNOB	KBT1A381	1
39	MOTOR.VR	BVVBB01A104Z	1
40	MEMORY KNOB	KBT1A376	1
41	REMOCON FILTER	KGU1A026	1
42	FLT BRACKET	KMD1A127	1
43	BOTTOM PLATE	KUA1A130	1
44	PCB MOUNT	KHE1A023	1
45	RIGHT CHASSIS	KUC1A029	1
46	PCB BRACKET	KMD1A318	6
47	INPUT PCB ASS'Y	KOP10963B	1
48	PCB BRACKET	KMD1A061	4
49	IN/OUT JACK	KJJ4P002Z-K	1
50	HEAT SINK B	KMY1A018	1
51	SURROUND PCB ASS'Y	KOP10965B	1
52	TUNER PCB ASS'Y	KOP10964	1
53	ANT TERMINAL	KJJ3S006Z	1
54	JACK	KJJ4S005Z	1
55	JACK	KJJ4N010Z	1
56	JACK	BJJ2D003Z	1
57	GROUND TERMINAL	KMA2A001	1
58	SCREW	KTB3+8J	46
59	SCREW	KTW3+10J	11
60	SCREW	KTB3+10G	21
61	SCREW	KTB4+6FFZ	6
62	SCREW	KTB4+8F	4
63	SCREW	KTB3+8JFZ	9
64	SCREW	KTB3+12GFZ	15
65	SCREW	KTWS3+10G	1

EXPLODED VIEW (RZ-5110AV)



NO	DESCRIPTION	PARTS-NO	Q'TY
1	BADGE	BGB1A046	1
2	LEVEL KNOB	KBT1A371	1
3	FUNCTION KNOB	KBT1A375	1
4	POWER KNOB B	KBT1A377	1
5	PLATE INDICATOR	KGL1A039	1
6	POWER KNOB A	KBT1A378	1
7	POWER BRACKET	KMD1A321	1
8	POWER SWITCH	KSH1A001ZV	1
9	MATRIX KNOB	KBT1A374	1
10	PRESET KNOB	KBT1A373	2
11	FRONT PCB ASS'Y	KOP10962B	1
12	SPEAKER KNOB	KBC1A068	2
13	HEADPHON JACK	BJJ2E016Z	1
14	FRONT CHASSIS	KUF1A018	1
15	FOOT CUSHION	KHG2A050X	4
16	FOOT	KKL1A046H	4
17	BOTTOM CHASSIS	KUA1A129	1
18	POWER TRANS	KLT5U005ZU	1
19	TOP CABINET	KKC1B074Z	1
20	HEAT SINK A	KMY1A107	1
21	MAIN PCB ASS'Y	KOP10967B	1
22	SUB TRANS	KLT5J022ZU	1
23	S/P TERMINAL 8P	KJJ5Q001Z-C	1
24	HEAT BRACKET	KMD1A319	3
25	PCB BRACKET B	KMD1A320	1
26	S/P TERMINAL 6P	KJJ5R003Z	1
27	REAR PANEL	KKF1A122ZK1	1
28	AC CORD BUSHING	KHR129	1
29	POWER CORD	KJA2A013Z	1
30	FRONT ORNAMENT	KGR1A101Z	1
31	GUIDE POLE	KDF1A015	2
32	FIP WINDOW	KGU1A151Z	1
33	BALANCE KNOB	KBN1A067	3
34	VOLUME KNOB	KBN1A055	1
35	FRONT PANEL	KGW1A174	1
36	RES.VR	BVV1U01W104Z	1
37	MODE KNOB	KBT1A372	1
38	SCAN KNOB	KBT1A381	1
39	MOTOR.VR	BVVBB01A104Z	1
40	MEMORY KNOB	KBT1A376	1
41	REMOCON FILTER	KGU1A026	1
42	FLT BRACKET	KMD1A127	1
43	BOTTOM PLATE	KUA1A130	1
44	PCB MOUNT	KHE1A023	1
45	RIGHT CHASSIS	KUC1A029	1
46	PCB BRACKET	KMD1A318	6
47	INPUT PCB ASS'Y	KOP10963B	1
48	PCB BRACKET	KMD1A081	4
49	IN/OUT JACK	KJJ4P002Z-K	1
50	HEAT SINK B	KMY1A018	1
51	SURROUND PCB ASS'Y	KOP10965B	1
52	TUNER PCB ASS'Y	KOP10964	1
53	ANT TERMINAL	KJJ3S006Z	1
54	JACK	KJJ4S005Z	1
55	JACK	KJJ4N010Z	1
56	JACK	BJJ2D003Z	1
57	GROUND TERMINAL	KMA2A001	1
58	SCREW	KTB3+8J	46
59	SCREW	KTW3+10J	11
60	SCREW	KTB3+10G	21
61	SCREW	KTB4+6FFZ	6
62	SCREW	KTB4+8F	4
63	SCREW	KTB3+8JFZ	9
64	SCREW	KTB3+12GFZ	15
65	SCREW	KTWS3+10G	1

EXPLODED VIEW (RZ-5200AV)



NO	DESCRIPTION	PARTS-NO	Q'TY
1	BADGE	BGB1A046	1
2	LEVEL KNOB	KBT1A371	1
3	FUNCTION KNOB	KBT1A375	1
4	POWER KNOB B	KBT1A377	1
5	FLATE INDICATOR	KGL1A039	1
6	POWER KNOB A	KBT1A378	1
7	POWER BRACKET	KMD1A321	1
8	POWER SWITCH	KSH1A001ZV	1
9	MATRIX KNOB	KBT1A374	1
10	PRESET KNOB	KBT1A373	2
11	FRONT PCB ASS'Y	KOP10962B	1
12	SPEAKER KNOB	KBC1A066	2
13	HEADPHON JACK	BJJ2E016Z	1
14	FRONT CHASSIS	KUF1A018	1
15	FOOT CUSHION	KHG2A050X	4
16	FOOT	KKL1A046H	4
17	BOTTOM CHASSIS	KUA1A129	1
18	POWER TRANS	KLT5U005ZU	1
19	TOP CABINET	KKC1B074Z	1
20	HEAT SINK A	KMY1A107	1
21	MAIN PCB ASS'Y	KOP10967B	1
22	SUB TRANS	KLT5J022ZU	1
23	S/P TERMINAL 8P	KJJ5Q001Z-C	1
24	HEAT BRACKET	KMD1A319	3
25	PCB BRACKET B	KMD1A320	1
26	S/P TERMINAL 6P	KJJ5R003Z	1
27	REAR PANEL	KKF1A122ZK1	1
28	AC CORD BUSHING	KHR129	1
29	POWER CORD	KJA2A013Z	1
30	FRONT ORNAMENT	KGR1A101Z	1
31	GUIDE POLE	KDF1A015	2
32	FIP WINDOW	KGU1A151Z	1
33	BALANCE KNOB	KBN1A067	3
34	VOLUME KNOB	KBN1A065	1
35	FRONT PANEL	KGW1A174	1
36	RES.VR	BVV1U01W104Z	1
37	MODE KNOB	KBT1A372	1
38	SCAN KNOB	KBT1A381	1
39	MOTOR.VR	BVVBB01A104Z	1
40	MEMORY KNOB	KBT1A376	1
41	REMOCON FILTER	KGU1A026	1
42	FLT BRACKET	KMD1A127	1
43	BOTTOM PLATE	KUA1A130	1
44	PCB MOUNT	KHE1A023	1
45	RIGHT CHASSIS	KUC1A029	1
46	PCB BRACKET	KMD1A318	6
47	INPUT PCB ASS'Y	KOP10963B	1
48	PCB BRACKET	KMD1A081	4
49	IN/OUT JACK	KJJ4P002Z-K	1
50	HEAT SINK B	KMY1A018	1
51	SURROUND PCB ASS'Y	KOP10965B	1
52	TUNER PCB ASS'Y	KOP10964	1
53	ANT TERMINAL	KJJSS006Z	1
54	JACK	KJJ4S005Z	1
55	JACK	KJJ4N010Z	1
56	JACK	BJJ2D003Z	1
57	GROUND TERMINAL	KMA2A001	1
58	SCREW	KTB3+8J	46
59	SCREW	KTW3+10J	11
60	SCREW	KTB3+10G	21
61	SCREW	KTB4+6FFZ	6
62	SCREW	KTB4+8F	4
63	SCREW	KTB3+8JFZ	9
64	SCREW	KTB3+12GFZ	15
65	SCREW	KTWS3+10G	1

PARTS LIST

ATTENTION

1. **When placing an order for parts, be sure to list the Part No., Model No. and the description of each part. Otherwise, the non-delivery of the part or the delivery of a wrong part may result.**
2. **Please make sure that Part No. is correct when ordering. If not, a part different from the one you ordered may be delivered.**
3. **Since the parts shown in Parts List of Preliminary Service Manual may have been the subject of changes, please use this Parts List for all future reference.**

HOW TO USE THIS PARTS LIST

1. This Parts List lists those parts which are considered necessary for repairs. Other common parts, such as resistors and capacitors, are listed in the "Common List for Service Parts" from which these parts should be selected and stocked.
2. Parts not shown in the Parts List and "Common List for Service Parts" will not in principle be supplied.
3. How to read the Parts List.

■ Resistor and Capacitor

Notes :
- Part numbers are indicated for most mechanical parts. Please use this part number for parts order.
- IMPORTANT SAFETY NOTICE. Components identified by △ mark have special characteristics important for safety. When replacing any of these components, use only manufacture's specified parts.
- The unit of resistance is OHM(Ω) K=1000(Ω), M=1000(KΩ)
- The unit of capacitance is MICROFARAD(μF).
- $P=10^{-6}\mu F$

■ Numbering System of Resistor

Example

KRD	25	F	J	101
Type	Wattage	Shape	Tolerance	Value

Resistor Type	Wattage	Tolerance
KRD:Carbon	20:1/5W	F:=±1%
KRG:Metal Oxide	25:1/4W	J:=±5%
	50:1/2W	K:=±10%
	1:1W	
KRF:Metal Cement	2:2W	
	3:3W	

■ Numbering System of Capacitor

Example

KCKR	1H	101	K	B
Type	Voltage	Value	Tolerance	Peculiarity

Capacitor Type	Voltage		Tolerance
	ECEA Type	Other	
KCB:Ceramic	OJ:6.3V	1H:50V DC	C:±0.25pF
KCC:Ceramic	1A:10V	1:125V DC	G:±2%
KCK:Ceramic	1C:16V	KC:400V AC	J:±5%
KCFR:Semiconductor	1E:25V		K:±10%
KCQI:Polyester	1H:50V		Z:+80%, -20%
KCQP:Polypropylene	1V:35V		
KCQS:Polystyrol			

WARNING

△ (*) INDICATES SAFETY CRITICAL COMPONENTS. FOR CONTINUED SAFETY, REPLACE SAFETY CRITICAL COMPONENTS ONLY WITH MANUFACTURE'S RECOMMENDED PARTS.

AVERTISSEMENT

△ (*) IL INDIQUE LES COMPOSANTS CRITIQUES DE SÉCURITÉ. POUR MAINTENIR LE DEGRÉ DE SÉCURITÉDE L'APPAREIL, NE REMPLACER QUE DES PIÉCES RECOMMANDEES PAR LÉ FABRICANT.

■ ELECTRICAL PARTS LIST

P.C BOARD BLOCK PART No.

PART No.	DESCRIPTION
1. KOP10962	FRONT PCB ASS'Y
2. KOP10963	INPUT PCB ASS'Y
3. KOP10964	TUNER PCB ASS'Y
4. KOP10965	SURROUND PCB ASS'Y
5. KOP10967	MAIN PCB ASS'Y
6. KOP11015	FUSE PCB ASS'Y

FRONT PCB BLOCK CONSISTS FOLLOWING P.C.B.

- u-COM P.C. BOARD
- SP SWITCH P.C. BOARD
- TONE CONTROL P.C. BOARD
- MASTER VR P.C. BOARD
- POWER SWITCH P.C. BOARD

INPUT PCB BLOCK CONSISTS FOLLOWING P.C.B.

- INPUT & C/S AMP P.C. BOARD

TUNER PCB BLOCK CONSISTS FOLLOWING P.C.B.

- TUNER AMP P.C. BOARD

SURROUND PCB BLOCK CONSISTS FOLLOWING P.C.B.

- SURROUND P.C. BOARD

MAIN PCB BLOCK CONSISTS FOLLOWING P.C.B.

- POWER & L/R AMP P.C. BOARD
- VIDEO CONTROL P.C. BOARD
- POWER SUPPLY P.C. BOARD
- C/S SPEAKER P.C. BOARD

1. FRONT PCB

REF.No.	PART No.	DESCRIPTION
IC31,IC32	BVINJM4558L	I.C , OP AMP
IC35	KVIKIA6259S	I.C , OP AMP
IC91	BVIANAM1174M	I.C , u-COM
IC92	BRVPIC12043	I.C , SENSOR
IC93	BVIRE5VA30CC	I.C , RESET
Q341,Q342	KVTKSD1021YT	T.R
Q343,Q344	KVTKSB811YT	T.R
Q901	KVTKSB811YT	T.R
Q902	KVT2SC1740SRT	T.R
Q904,Q905	KVTDTA114YST	T.R
Q908	KVTDTA114YST	T.R
Q909,Q910	KVTDTC114YST	T.R
D301	KVDDL22VR	L.E.D , RED
D901,D902	KVD1N4148MT	DIODE
D904	KVD1N4148MT	DIODE
D906	KVD1N4148T	DIODE
D907	KVD1N4148MT	DIODE
D908	KVD342VCF02T085	L.E.D, RED
BN24	KWZRZ5100AV24	WIRE ASS'Y
BN25	KWZRZ5100AV25	WIRE ASS'Y
BN26	KWZRZ5100AV26	WIRE ASS'Y
BN32	KWZRZ5100AV32	WIRE ASS'Y
BN34	KWZRZ5100AV34	WIRE ASS'Y
BN36	KWZRZ5100AV36	WIRE ASS'Y
BN37	KWZRZ5100AV37	WIRE ASS'Y
BN42	KWZRZ5100AV42	WIRE ASS'Y
BN81	KWZRZ5100AV81	WIRE ASS'Y
BN91	KWZRZ5100AV91	WIRE ASS'Y
BN92	KWZRZ5100AV92	WIRE ASS'Y
BN93	KWZRZ5100AV93	WIRE ASS'Y
BN94	KWZRZ5100AV94	WIRE ASS'Y
CN31	KJP03GA09ZG	WAFER
CN32	KJP07GA01ZM	WAFER
CN35	KJP03GA01ZM	WAFER
CN36	KJP04GA01ZM	WAFER
CN37	KJP02GA01ZM	WAFER
CN82	KJP04GA01ZM	WAFER
CN87	KJP02KA060ZY	WAFER
C901	BCES5R5V104	CAP , GOLD
C902	KCEA0JH102B	CAP , ELECT
C925	BCKWKC103MF	CAP , CERAMIC
FIP1	KFLSVA15MM03	F.I.P.
JB21	KJJ4M017Z	JACK , VCR
JB22	KJJ4M018Z	JACK , VCR
JB23	KJJ4M019Z	JACK , VCR
JK71	BJJ2E019Z	JACK , HEADPHONE
L901	KLQ02C100KT	COIL
S901~S939	BST1A014ZT	SW , TACT
SW71,SW72	KSH2B017Z	SW , PUSH
SW81	KSH1A001ZV	SW , PUSH
VR31,VR32	BVV2X01C104Z	RES , VARIABLE
VR33	BVV1U01W104Z	RES , VARIABLE
VR34	BVVBB01A104Z	RES , VARIABLE
X901	KOX08000E160C	CRYSTAL
Z901	KRGSN7X104J	RES , NETWORK
Z902	KRGSN6X104J	RES , NETWORK

2. INPUT PCB

REF.No.	PART No.	DESCRIPTION
IC1	BVINJM4558L	I.C , OP AMP
IC2	BVINJU7313L	I.C , FUNC. SEL
IC3	BVINJU7311L	I.C , FUNC. SEL
IC4	BVINJM4558L	I.C , OP AMP
Q1,Q2	KVTKTC2878BT	T.R
Q101,Q102	KVTKTC2878BT	T.R
Q103,Q104	KVTKTC2878BT	T.R
Q105,Q106	KVTKSA992FT	T.R

REF.No.	PART No.	DESCRIPTION
Q109,Q110	BVT2SD1585L	T.R
Q111,Q112	KVTKSC2785YT	T.R
Q113,Q114	KVTKSC2785YT	T.R
Q115,Q116	KVTKSC2316YT	T.R
Q117,Q118	KVTKSA916YT	T.R
Q119,Q120	KVTKTD998O	T.R
Q121,Q122	KVTKSD778O	T.R
Q123,Q124	KVTKSC2785YT	T.R
Q125	KVTDTA114YST	T.R
Q126,Q127	KVTKSC2785YT	T.R
Q128	KVTKSA733CYT	T.R
Q130	KVTKSC2785YT	T.R
Q131,Q132	KVTDTC114TST	T.R
D101	KVDMTZJ15BT	DIODE , ZENER
D102	KVDUZ15BMT	DIODE , ZENER
D103,D104	KVD1N4148MT	DIODE
D106~D108	KVD1N4148MT	DIODE
BN21	KWZRZ5100AV21	WIRE ASS'Y
BN27	KWZRZ5100AV27	WIRE ASS'Y
BN31	KWZRZ5100AV31	WIRE ASS'Y
BN35	KWZRZ5100AV35	WIRE ASS'Y
BN71	KWZRZ5100AV71	WIRE ASS'Y
CN25	KJP05GA09ZG	WAFER
CN41	KJP03GA63ZY	WAFER
CN43	KJP10GA63ZY	WAFER
CN51	KJP13GA52ZG	WAFER (UL/SS)
CN51	KJP16GA52ZG	WAFER (CE)
CN72	KJP10GA01ZM	WAFER
CN91	KJP08GA01ZM	WAFER
CN92	KJP05GA01ZM	WAFER
L101,102	KLEYK1R8KA	COIL
R137,R138	KRG1ANJ181H	RES , METAL OXIDE FILM
R143~R146	KRF3CJR27H	RES , CEMENT
R151,R152	KRG1ANJ4R7H	RES , METAL OXIDE FILM
R155,R156	KRG1ANJ100H	RES , METAL OXIDE FILM
	KJJ4P014Z	JACK , IN/OUT
	KJJ4R012Z	TERMINAL , IN/OUT
	3. TUNER P.C.B	
IC51	BVILA1266	I.C , FM IF & AM RF,IF
IC52	BVILA3361	I.C , MPX
IC53	BVILM7001	I.C , PLL
IC54	KVIMC4558S	I.C , OP AMP
IC62	BVILA2232	I.C , RDS
Q501,Q502	KVTKTC31920T	T.R
Q503	KVTDTA114YST	T.R
Q506,Q507	KVT2SC1740SRT	T.R
Q511,Q512	KVTDTA114YST	T.R
Q514	KVTDTC114TST	T.R
Q519,Q520	KVT2SC1740SRT	T.R
D501	KVDKV1236Z	DIODE , VARICAP
D502~D509	KVD1N4148MT	DIODE
D601	KVD1N4148MT	DIODE
BPF1	BRVBPM88	B.P.F
CB51	KJP13HB53ZG	WAFER , HOUSING (UL/SS)
CB51	KJP16HB53ZG	WAFER , HOUSING (CE)
CF51,CF52	BVFE107MSH-A	FILTER , CERAMIC
CF53	BVFSFZ450F	FILTER , CERAMIC
CT51	KCRA020S12	CAP , VARIABLE
FE51	KNVFTA3508H	PACK , TUNER
FE51	KNVFTA4460H	PACK , TUNER
JK51	KJJ3S006Z	TERMINAL , ANT
JK51	KJJ3S007Z	TERMINAL , ANT
JW51	KWE820270AA	WIRE ASS'Y
JW52	KWZNT20001	WIRE ASS'Y
L501	KLA2C005	COIL , AM ANT2
L502	KLO2B008Z	COIL , AM OSC
L505,L506	KLQB542KLZ	COIL
L651	KLA4Y106Z	COIL , FILTER
L652	KLQA183KW	COIL
T501	KLI3B020-G	I.F.T , FM
T502	KLI3B021-G	I.F.T , FM
T503	KLI2B105-G	I.F.T , FM
VR51,VR52	BVN1PA203B01T	RES , SEMI FIXED
VR53,VR54	BVN1PA103B01T	RES , SEMI FIXED
VR62	BVN1PA502B01T	RES , SEMI FIXED
X501	BVFBFU450C4N	FILTER , CERAMIC
X502	KOX07200A200C	CRYSTAL
X601	BVFCSB456F33	RESONATOR , CERAMIC
	4. SURROUND P.C.B	
IC42	BVINJW1102L	I.C , PRO LOGIC
IC43	BVINJU9702D	I.C , DELAY
CB41	KJP03HB60ZY	HOUSING
CB43	KJP10HB60ZY	HOUSING
X401	BVFKBR-1000H	RESONATOR , CERAMIC
	5. MAIN P.C.B	
IC27	KVIGD4066B	I.C , SWITCHING
IC81	KVIMC7812C	I.C , REGULATOR
IC82	KVIMC7912C	I.C , REGULATOR
IC83,IC84	KVIMC7805C	I.C , REGULATOR
Q261~Q266	KVTKSA733CYT	T.R
Q701~Q704	KVTKSA992FT	T.R

REF.No.	PART No.	DESCRIPTION
Q705～Q708	KVTKSC2785YT	T.R
Q709,Q710	BVT2SD1585L	T.R
Q711,Q712	KVTKSC2690A	T.R
Q713,Q714	KVTKSA1220A	T.R
Q715,Q716	BVT2SC4467	T.R
Q717,Q718	BVT2SA1694	T.R
Q719～Q722	KVTKTC2878BT	T.R
Q723,Q724	KVTKSC2785YT	T.R
Q725	KVTKSA1175YT	T.R
Q726～Q729	KVTKSC2785YT	T.R
Q730	KVTKSR2206T	T.R
Q801	KVTKTD288Y	T.R
Q802	KVTKSA1175YT	T.R
Q803	KVTKSC2785YT	T.R
Q804	KVTKSA614Y	T.R
Q805	KVTKSC2785YT	T.R
Q806	KVTKSA1175YT	T.R
Q807	KVTKSA614Y	T.R
Q808	KVTKSC2785YT	T.R
Q809	KVTKTA1271YT	T.R
Q810,Q811	KVTKTC3203YT	T.R
Q812	KVTDTA114YST	T.R
Q813	KVTKSC945CYT	T.R
Q814	KVTKSA733CYT	T.R
D8,D9	KVDIN4148MT	DIODE
D701,D702	KVDUZ15BMT	DIODE , ZENER
D705～D707	KVDIN4148T	DIODE
D708～D710	KVDIN4148MT	DIODE
D801	BVDPBPC803F	DIODE , BRIDGE
D811～D813	KVD1N4003ST	DIODE , RECT
D814	KVDUZ6.2BMT	DIODE , ZENER
D815	KVDUZ33BMT	DIODE , ZENER
D816～D818	KVD1N4148MT	DIODE
D819～D822	KVD1N4003ST	DIODE , RECT
D823	KVD1N4148MT	DIODE
BN72	KWZRZ5100AV72	WIRE ASS'Y
BN82	KWZRZ5100AV82	WIRE ASS'Y
BN83	KWZRZ5100AV83	WIRE ASS'Y
BN84	KWZRZ5100AV84	WIRE ASS'Y
CN21	KJP04GA01ZM	WIRE ASS'Y
CN24	KJP03GA09ZG	WAFER
CN26	KJP03GA01ZM	WAFER
CN27	KJP02GA01ZM	WAFER
CN34	KJP03GA01ZM	WAFER
CN71	KJP05GA09ZG	WAFER
CN81	KJP04GA01ZM	WAFER
CN83	KJP05GB03ZM	WAFER
CN84	KJP06GB03ZM	WAFER
CN88	KJP02KA060ZY	WAFER
CN93	KJP05GA09ZG	WAFER
CN94	KJP05GA01ZM	WAFER

REF.No.	PART No.	DESCRIPTION
C801,C802	KCETS63V822U	CAP , ELECT
C803,C804	KCEA1EH471E	CAP , ELECT
C825	KCEA0JH102B	CAP , ELECT
C830	KCEA1EH102E	CAP , ELECT
JW85	KWED202100PP	WIRE
JW87	KWZRZ5100AV87	WIRE ASS'Y
L701,L702	KLEYK1R8KA	COIL
RY81	KSL1A007ZE	RELAY
RY82	KSL4B003ZW	RELAY
R283～R285	KRG1ANJ151H	RES,METAL OXIDE FILM
R286	KRG1ANJ100H	RES,METAL OXIDE FILM
R733,R734	KRG1ANJ181H	RES,METAL OXIDE FILM
R735～R738	KRF3CJR27H	RES , CEMENT
R745,R746	KRG1ANJ4R7H	RES,METAL OXIDE FILM
R747,R748	KRG1ANJ100H	RES,METAL OXIDE FILM
R801,R802	KRD50FJ123T	RES , CARBON
R805,R806	KRQ1CJR47	RES , FUSE
R807,R808	KRG1ANJ4R7H	RES,METAL OXIDE FILM
R832	KRD50TJ335T	RES , CARBON
R833	KRQ1CJ100	RES , FUSE
R834	KRG1ANJ100H	RES,METAL OXIDE FILM
	BJJ2D003Z	JACK , STEREO
	KJJ4N012Z	JACK , BOARD
	KJJ4S005Z	JACK , VCR
	KJJ5Q001Z-C	TERMINAL,SPEAKER 8P
	KJJ5R004Z	TERMINAL , SPEAKER
	KLT5J022ZE	TRANS , SUB (CE)
	KLT5J022ZW	TRANS , SUB (SS)
	KLT5J022ZU	TRANS , SUB (UL)

6. FUSE P.C.B

REF.No.	PART No.	DESCRIPTION
Q811	KVTKTC3203YT	T.R
D817	KVD1N4148MT	DIODE
CN86	KJP04GA01ZM	WAFER
CN88	KJP03KA060ZY	WAFER
JW11	KWEP215110VV	WIRE
JW12	KWEP212120VV	WIRE
JW13	KWEP202110VV	WIRE
JW87	KWZRZ5100AV87	WIRE ASS'Y
RY81	KSL1A007ZE	RELAY
SW81	KSS2B003Y	SW , SLIDE

7. MISCELLANEOUS

REF.No.	PART No.	DESCRIPTION
	KSA1A008Z	AM LOOP ANT ASS'Y (CE)
	KSA1A009Z	ANT , AM LOOP(UL/SS)
	KSA1A010Z	ANT , FM T (UL/SS)
	KLT5U005ZE	TRANS , MAIN (CE)
	KLT5U005ZU	TRANS , MAIN (UL)
	KLT5U005ZW	TRANS , MAIN (SS)
	KBA2C3150NRE	FUSE (CE)
	KBA2C3150NRU	FUSE (SS)
	KBA2C6000NRU	FUSE (UL/SS)

山水電気株式會社
〒962-04 福島県須賀川市大字滑川字関の上22番地
22, AZA SEKINOUE, OAZA NAMEGAWA, SUKAGAWA-SHI, FUKUSHIMA-KEN 962-04, JAPAN